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Part I

THE ROLE OF AMBIGUITY IN STRATEGIC DETERRENCE

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A Thesis  
Presented to the  
Faculty of  
San Diego State University

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by  
Ronald Evan Blum  
Summer 1976

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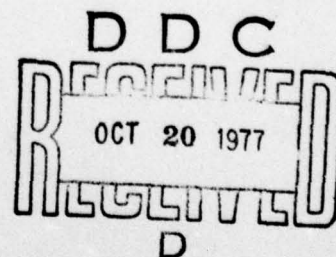
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In Partial Fulfillment  
of the Requirements for the Degree  
Master of Arts  
in  
Political Science

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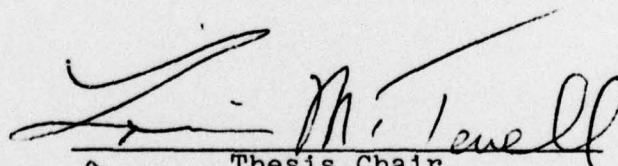
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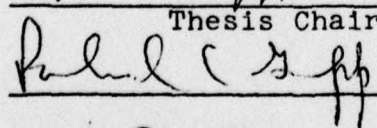
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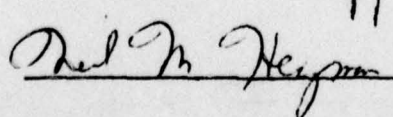
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To Helen,

whose love, patience, and understanding made  
this thesis--and much more--possible



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"Would you tell me, please, which way I ought to go from here?"

"That depends a good deal on where you want to get to."

"I don't much care where. . . ."

"Then it doesn't matter which way you go."

". . . so long as I get somewhere."

"Oh, you're sure to do that, if you only walk enough."

-Conversation between Alice and  
the Cheshire Cat



## CHAPTER I

### INTRODUCTION

#### Purpose and Scope

→ The following paper attempts to fill an existing substantive gap in the literature of strategic deterrence by presenting both theoretical analysis and a historical case study of ambiguity in deterrence threats. Many academic and military strategists have touched on the role of ambiguity in threat relationships, but there exists no comprehensive treatment of the subject.

Most strategic commentators have treated ambiguity as a readily manipulable tool in the hands of decision makers. The implied assumption of the literature has been that decision makers are free to employ the degree of ambiguity that best suits their immediate needs. In this sense, ambiguity is an independent variable, in that it is not "caused" or influenced by any other factor other than the free choice of policy makers. When ambiguity is independent of external influences, one cannot regard it as a valid indicator of anything other than the capriciousness of

policy makers.

The position of this paper is that to maintain a balanced and realistic perspective, it is quite useful to conceptualize the degree of ambiguity present in any given deterrence threat as a dependent, as well as independent, variable, i.e., as having causes as well as effects. When degree of ambiguity is treated as a dependent variable, it is assumed the preexisting conditions do indeed have an influence on it. Once this assumption is made, the study of ambiguity attains both greater theoretical importance and policy relevance. If a causal or even correlational relationship can be demonstrated between ambiguity and certain specific preexisting conditions, then the degree of ambiguity employed by an adversary in some future threat can be used as a valid index of other conditions, possibly less accessible to direct scrutiny. Efforts in this direction have been noticeably lacking in the literature of deterrence ambiguity to date.

There exists an enduring disparity between deterrence theory and practice. Classic deterrence theory holds that couching a threat in ambiguous terms serves to detract from credibility and hence, effectiveness, of the threat. One quickly learns that ambiguity is to be eschewed, and that the target of any given

threat will perceive ambiguity as a sign of weakness. Maximum clarity in stating the threat is correlated with credible and successful deterrence outcomes. Directly conflicting evidence is presented by the language of threat in the real world. Virtually all deterrent threats are couched in language that is to some degree ambiguous. In order to explain the disparity between theory and practice, one must go beyond the two-party/one-issue model of deterrence and consider each deterrence attempt as imbedded in the more general context of international relations. With the possible exception of the most basic instance of deterrence of direct attack on one's homeland, the means by which a deterring state (source) influences another (target) to take or avoid a certain course of action are dictated by a whole host of considerations, some of which may well transcend the specific issue of the moment. The broad range of interests held by the deterring power can act as a moderating influence so as to transform his deterrence attempt from the theoretically ideal posture of maximum clarity to one of some degree of ambiguity.

The heretofore theoretically unexplained existence of ambiguity in actual deterrence threats is a powerful argument for the inadequacy of present



deterrence theory. Incorporation of the concept of subsidiary motives (as defined below) into the classic deterrence model may be an important first step in closing the gap between theory and practice. In effect, deterrence theory has been highly normative, rather than descriptive, in nature, and has enjoyed a degree of autonomy from the context of general international relations that may not be justified.

The chronological scope of the paper is limited to the postwar era. Most theorists concur that the advent of nuclear weapons and efficient and reliable means of delivery have qualitatively changed the character of military deterrence. Deterrence as a psychological tool to preserve state interests is not a new concept, but the ability to "threaten vast damage and pain while leaving opposing military forces intact" is.<sup>1</sup>

---

<sup>1</sup>Alexander L. George and Richard Smoke, Deterrence in American Foreign Policy: Theory and Practice (New York: Columbia University Press, 1974), p. 21; Bernard Brodie, Strategy in the Missile Age (Princeton, New Jersey: Princeton University Press, 1959), p. 271; David C. Schwartz, "Decision Making in Historical and Simulated Crises," in International Crises: Insights From Behavioral Research, ed. Charles F. Hermann (New York: Free Press, 1972), p. 171, for typical arguments in favor of 1945 as the logical starting point for modern theories of deterrence. A dissenting voice belongs to George H. Quester, who holds that "We are not so alone in the 'balance of terror' problem that we face, or so original in our solutions to it." See



The focus of the paper is the concept of strategic deterrence and not its implementation within the context of American foreign policy. Examples of American attempts to exercise the policy of deterrence are freely used for illustrative purposes, but hypotheses that are generated and conclusions reached will refer to the specific policies of no particular country, but to the theoretical concept of deterrence itself.

#### Organization

The paper is divided into five chapters, of which this introduction is the first. The chapter on methodology is broader in scope than if it were merely a justification for the approach used in this paper. It presents a comparative analysis of the relative strengths and weaknesses of the qualitative and quantitative approaches to the empirical study of deterrence and reviews significant examples of each approach. In the third chapter an attempt is made to assemble the major theoretical notions concerning deterrence ambiguity. Applicable research from social psychology

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George H. Quester, Deterrence Before Hiroshima: The Airpower Background of Modern Strategy (New York: John Wiley & Sons, 1966), pp. 1-5.

and game theory is included to supplement the writings of academic and military strategists.

The fourth chapter consists of a historical study of Soviet threats directed towards Britain, France, and Israel during the 1956 Suez Crisis. This particular crisis was selected as the subject of the case study for a number of reasons. Suez was a postwar crisis of limited and definable duration involving both superpowers and medium powers. In keeping with the focus of the paper on deterrence rather than American foreign policy, the case centers on nuclear threats by the Soviet Union and how other countries perceived and reacted to them. American perceptions and actions played a key role in determining the outcome of the crisis, but American power was projected primarily by diplomatic and economic, rather than military, means. Soviet actions during the crisis were in fact dictated as much or more by subsidiary motives as by a genuine desire to deter by military threat the continuance of British and French military operations against Nasser's Egypt. Soviet threats were ambiguous, may or may not have realistically reflected actual military capabilities, and may or may not have reflected the level of force to which Soviet decision makers were prepared to resort in the event of noncompliance. While British,

French, Israeli, and American actions in the Suez Crisis have been extensively analyzed, aided in no small part by published memoirs of many of the key participants, the truth concerning Soviet perceptions, aims, capabilities, and actions remains elusive. Thus, selection of Soviet threats in the Suez Crisis as the sole case study incorporated within the paper is justified on grounds of historical as well as theoretical interest.

The final chapter includes a discussion of both substantive conclusions and theoretical hypotheses generated by the Suez Crisis study. Finally, an alternative to the two-party/one-issue model of deterrence is presented.

#### Definitions and Critical Distinctions

Specialized terms requiring definition are discussed below.

Demand and sanction. Every contingent threat is comprised of two components, demand and sanction.<sup>2</sup> The demand defines the behavior that the source wishes

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<sup>2</sup>The present paper is concerned only with contingent threats, which may be expressed in the form, "If you do X (or not X), then I will do Y." A noncontingent threat is expressed in the form, "I will do X." See James T. Tedeschi, "Threats and Promises," in The Structure of Conflict, ed. Paul Swingle (New York: Academic Press, 1970), p. 160.



to elicit from the target. In order to avoid confusion concerning the distinction between deterrent and compellent threats, usage in this paper always assumes the source wishes the demand to be fulfilled. This in no way prevents the definition of any given demand as abstention from a course of action the target might otherwise wish to undertake. For instance, the demand each of the superpowers makes of the other in the basic nuclear deterrence relationship is abstention from attacking. The sanction is the threatened penalty that will be imposed by the source if the target fails to fulfill the demand. Of utmost importance is the fact that a threat may incorporate different degrees of ambiguity in each component.<sup>3</sup>

Threat and warning. The essential difference between a threat and a warning is that the communicator of a threat also controls the means of imposing the sanction, while the communicator of a warning is merely pointing out the natural and inevitable consequences of the target's failure to comply with the specified demand.<sup>4</sup> Warnings are simpler and theoretically more

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<sup>3</sup>Glenn H. Snyder, "Crisis Bargaining," in International Crises, p. 248.

<sup>4</sup>Fred C. Ikle, How Nations Negotiate (New York: Harper & Row, 1964), p. 62.



powerful than threats, since the target has no recourse against a "messenger," whereas he may be able to employ any number of tactics to dissuade a threatener from carrying through with a specified sanction.<sup>5</sup>

Deterrence and defense. Deterrence and defense are two distinguishable strategies that may be employed in order to protect an interest. Deterrence is an attempt to elicit a desired behavior from a second party through cognitive means, i.e., the communication of intent to punish, retaliate, or militarily defend the threatened interest (thereby imposing costs on the target). Defense, on the other hand, is the purely physical protection of an interest by means of armed force. Deterrence is often employed in order to stave off recourse to military action, while defense is rarely utilized unaccompanied or unpreceded by at least a minimal attempt to deter. The level of physical violence threatened in a given deterrent attempt may or may not be proportional to the value placed by the source on the interest that is threatened.<sup>6</sup>

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<sup>5</sup>"Deterrence theorists often advocate that a volitional deterrent force be converted into an automatic tripwire retaliatory device, that is that a threat be converted into a warning." See Tedeschi, p. 161.

<sup>6</sup>For more thoughts on the distinction between deterrence and defense, see John R. Raser and Wayman J.

Ambiguity and clarity. Ambiguity in a given communication is defined as the perception of uncertainty by the target as to the meaning intended by the source. Absolute ambiguity and absolute clarity are at opposite ends of a continuum, and they thus differ in terms of degree rather than kind.<sup>7</sup>

There are generally acknowledged to be two levels of ambiguity:

There are two questions with which we are (or at least should be) concerned in any cognitive enterprise: "What do we mean by the words or symbols we use?" and "How do we know what we assert in these terms is true (or confirmed to some degree)?"<sup>8</sup>

The two levels of ambiguity are labeled the semantic and interpretative levels. Semantic ambiguity may be purposefully induced, but in cross-cultural communications, it often appears inadvertently. In one of their public signals to the United States, North Vietnam used a word that was ambiguous on the first, or semantic, level. The United States, thus, did not know

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Crow, "A Simulation Study of Deterrence Theories," in Social Processes in International Relations, ed. Louis Kriesberg (New York: John Wiley & Sons, 1968), p. 372.

<sup>7</sup>See David A. Baldwin, "Thinking About Threats," Journal of Conflict Resolution 15 (March 1971): 75.

<sup>8</sup>Herbert Feigl, "Operationism and Scientific Method," in Readings in Philosophical Analysis, eds. Herbert Feigl and Wilfrid Sellars (New York: Appleton-Century-Crofts, 1949), p. 498.

whether it had to "accept" or merely "recognize" Hanoi's position on a particular point.<sup>9</sup>

Semantic ambiguities may be an indicator of more basic disparities between two cultures:

One of the difficulties of Soviet-Russian vocabulary is that the word "compromise" is not of native origin and carries with it no favorable empathy. It is habitually used only in combination with the adjective "putrid." "Compromise for the sake of getting on with the job" is natural to American and British people, but it is alien to the Bolshevik way of thinking. . . . To give up a demand once presented, even a very minor or formalistic point, makes a Bolshevik-trained negotiator feel that he is losing control of his own will and is becoming subject to an alien will. Therefore any point which has finally to be abandoned must be given up only after a most terrific struggle. The Soviet negotiator must first prove to himself and his superiors that he is up against an immovable force. Only then is he justified in abandoning a point which plainly cannot be gained and in moving on to the next item, which will then be debated in an equally bitter tug of wills.<sup>10</sup>

Edwin Fedder minimizes the actual effect of semantic ambiguity on negotiations, noting that in prolonged face-to-face exchanges, uncertainty over

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<sup>9</sup>David Kraslow and Stuart H. Loory, The Secret Search for Peace in Vietnam, cited by Robert Jervis, The Logic of Images in International Relations (Princeton, New Jersey: Princeton University Press, 1970), p. 267.

<sup>10</sup>Philip Mosely, The Kremlin and World Politics, cited by Edwin H. Fedder, "Communication and American-Soviet Negotiating Behavior," Background 8 (August 1964): 109-10.



meaning of terms may necessitate nothing more drastic than excess verbiage to ensure that all parties are of similar understanding. However, in a threat situation in which messages between parties in a crisis are likely to be formal, limited, and impersonally delivered, the possibility of extended discussion of small points is removed. Semantic ambiguity may go unresolved and have a greater effect than it would in a negotiation context.

Be that as it may, the primary focus of the paper will be on the second, or interpretative level, of ambiguity. In actual practice, it is at this second, more sophisticated, level that deliberate ambiguities are most often introduced into international communications.

Objective and subjective ambiguity. Objective ambiguity is a term that describes the extent to which the threat source is himself uncertain as to what constitutes defiance of his deterrence attempt (objectively ambiguous demand) or what actions he will take if the demand is not fulfilled (objectively ambiguous sanction). Objective ambiguity is not synonymous with bluffing; as shall be demonstrated in Chapter III under the heading of "Determinants of Ambiguity," there are

often pressures and considerations beyond the source's control that create some level of objective ambiguity in nearly every threat situation.

Subjective ambiguity is the degree of ambiguity perceived by the target. It differs from objective ambiguity to the extent that the target's perceptions are affected by ecological variables outside the threat system. The target accepts the communication of a threat as a stimulus to be interpreted with respect to the set of all information, values, attitudes, and prejudices already on hand. Incoming information will usually be interpreted in a manner that does not contradict the already existing belief system of the target's decision makers. Expressed differently, the cognitive threshold that incoming conflicting information must surmount in order to be accepted or objectively interpreted is much higher than the negligible resistance against acceptance of information that is consistent with previously held beliefs.<sup>11</sup>

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<sup>11</sup>The most forceful empirical demonstration of this fact is provided by Ole R. Holsti, "The Belief System and National Images," Journal of Conflict Resolution 6 (September 1962): 244-52. Holsti performed content analysis on all of John Foster Dulles' publicly available statements as Secretary of State and found that Dulles interpreted all incoming information concerning Soviet military or diplomatic moves in a manner that would not counter his "inherent bad faith" model of the Soviet leadership.

Separation of objective and subjective ambiguity reveals a basic reliance on the phenomenological, or perceptual, approach to explaining men's actions. Kenneth Boulding captures the essence of the perceptual approach in the following passage:

We must recognize that the people whose decisions determine the policies and actions of nations do not respond to the "objective" facts of the situation, whatever that may mean, but to their "image" of the situation. It is what we think the world is like, not what it is really like, that determines our behavior.<sup>12</sup>

Adoption of a perceptual frame of reference for the study of deterrence ambiguity is mandatory, as perception provides the "media by which external conditions and factors are translated into a policy decision."<sup>13</sup> Singer notes that inquiry into explanation and causality without reference to "the cognitive and the perceptual linkage would be ontologically disastrous."<sup>14</sup>

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<sup>12</sup>Kenneth E. Boulding, "National Images and International Systems," Journal of Conflict Resolution 3 (June 1959): 120. Additionally, "The significance of a threat lies wholly in the way it is perceived by the parties." See Kenneth E. Boulding, Conflict and Defense; A General Theory (New York: Harper & Row, 1962), p. 253.

<sup>13</sup>J. David Singer, "The Level-of-Analysis Problem in International Relations," in The International System; Theoretical Essays, eds. Klaus Knorr and Sidney Verba (Princeton, New Jersey: Princeton University Press, 1961), p. 87.

<sup>14</sup>*Ibid.* For a schematic model of the mediated



Signals and indices. Robert Jervis has categorized international communications as either signals or indices. A signal is a communication issued for the primary reason of influencing the receiver's image of the sender. Signals can be readily used for deception, as they do not incorporate their own evidence that the sender will live up to them. Indices are statements or actions that "carry some inherent evidence that the image projected is correct because they are believed to be inextricably linked to the actor's capabilities or intentions." Indices are considered to have great predictive value since they are assumed to be beyond "the ability of the actor to control for the purpose of projecting a misleading image."<sup>15</sup> Examples of signals are public statements, willingness to engage in cultural exchanges, and certain types of military maneuvers. Indices may include overheard or intercepted private messages or any statement that the listener feels is not meant to influence him, but instead is aimed at some other audience that the speaker "was not able, would

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stimulus-response model, see Ole R. Holsti, Richard A. Brody, and Robert C. North, "The Management of International Crises: Affect and Action in American-Soviet Relations," in Theory and Research on the Causes of War, eds. Dean G. Pruitt and Richard C. Snyder (Englewood Cliffs, New Jersey: Prentice-Hall, 1969), p. 68.

<sup>15</sup>Jervis, pp. 18-19.

not want, or could not afford to deceive."<sup>16</sup> Actions and verbal behavior may be either signals or indices, though as a general rule, verbal behavior is most often in the realm of signals, while production and budgeting decisions, large-scale military deployments, and other actions are most often indices. A rule of thumb is that behavior that is reversible only at great cost to the actor can be interpreted as an index. Since the power of a deterrent threat manifests itself through the target's cognitive processes, the distinction between signal and index becomes key. The source's task is to express his deterrent threat in such a manner as to have it perceived as a valid index of a level of resolve or commitment that already exists. Deterrent threats unaccompanied by reinforcing behavioral evidence are often perceived merely as signals, thereby having reduced power to influence the target.

Autonomous probability. Autonomous probability is the "probability that an event will occur no matter what we consciously do about it."<sup>17</sup> Repeated apparent

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<sup>16</sup>Ibid., p. 35.

<sup>17</sup>Philip Green, Deadly Logic: The Theory of Nuclear Deterrence (Columbus: Ohio State University Press, 1966), p. 115.

successful applications of deterrence have ascribed to the strategy more potency than may be warranted. Deterrence is often a matter of trying to get the target to do something he is quite likely to do anyway, e.g., refrain from murder, rape, or nuclear attack.<sup>18</sup>

Baldwin takes issue with the distinction that is commonly made between deterrent and compellent threats, arguing that a more useful distinction would be based on the autonomous probability that the demand would be fulfilled in the absence of a threat. Baldwin's argument is compelling, since the usefulness of the deterrent-compellent dichotomy is based upon the assumption that compellent threats, a priori, are attempts to bring about a less probable outcome than deterrent threats. Defining deterrence demands in terms of autonomous probability places limits on the applicability of a deterrence strategy and provides a logical basis by which to evaluate deterrence outcomes.

Even the most intense and credible threats may not stop people from sneezing; nor might they stop social revolutions in Asia or Africa. . . . No threat can stop men from breathing. The strength of autonomous motivation may influence perceptions as well as acts. The more strongly people are motivated to act in a certain way, the more they are apt to disbelieve the most "credible" threats designed to stop them.<sup>19</sup>

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<sup>18</sup>Baldwin, p. 76.

<sup>19</sup>Karl W. Deutsch, The Nerves of Government



Subsidiary motives. This term is original with this paper and refers to all those motives of a threat other than the ostensive one of influencing the target to fulfill the demand. The existence of subsidiary motives introduces complications into the deterrence syllogism that are not adequately handled by the classic two-party/one-issue model of deterrence. One of the major factors influencing the selection of the Suez Crisis as the case study for the paper was the existence of a plethora of subsidiary motivations for the Russian threats that were made. On the fact of it, a case can be made for at least a correlational, if not causal, relationship between existence of subsidiary motives and degree of ambiguity incorporated into resultant deterrent threats. This relationship will be explored historically in the case study and analytically in the final chapter.

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(New York: The Free Press of Glencoe, 1963), p. 70.

## CHAPTER II

### METHODOLOGY: THE PROBLEM OF INFUSING EMPIRICAL DATA INTO STUDIES OF DETERRENCE

#### Contending Approaches

Academic strategic analysis came into its own in the United States in the late 1950s and early 1960s,<sup>1</sup> and the character of that analysis took its lead from the nature of American deterrence policy prevalent at that time. Thus, analysis tended to be highly a priori, deductivist, and overwhelmingly concerned with Type I Deterrence, or deterrence of direct attack.<sup>2</sup> Such analysis was often astute, well-informed, and original, but nonetheless lacking in an empirical basis for the theoretical formulations that were presented. In all fairness to the seminal writers on deterrence, there was good reason for this: empirical data on the decision-making process in the context of Type I Deterrence was just not available.

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<sup>1</sup>See for instance Herman Kahn, On Thermonuclear War (Princeton: Princeton University Press, 1960); Brodie, Strategy in the Missile Age; and Thomas C. Schelling, The Strategy of Conflict (Cambridge: Harvard University Press, 1960).

<sup>2</sup>Kahn, p. 126.

Later in the 1960s, after the Cuban missile crisis and after the two superpowers became effectively stalemated in terms of Type I Deterrence, both policy makers and academic strategists began applying the concept of deterrence to lower levels of conflict, with two major implications. First, in the real world, the exercise of deterrence became complicated in a hurry as the distinction between pure military threat and day-to-day political bargaining and negotiation became blurred, making it increasingly difficult to apply cleanly the developed deductivist theory of deterrence. This difficulty was reflected in the academic literature. Second, the need for an empirical basis for deterrence theory became painfully apparent. The conceptual expansion of deterrence into the area of limited conflict now made available to analysts just the sort of data required to fulfill the need. Bruce Russett's pioneering article, "The Calculus of Deterrence,"<sup>3</sup> was an early effort to infuse empirical data into deterrence analysis. Though the article was certainly not without its faults, it demonstrated that systematic empirical studies of deterrence were possible and could yield fruitful information.

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<sup>3</sup>Bruce M. Russett, "The Calculus of Deterrence," Journal of Conflict Resolution 7 (June 1963): 97-109.



The revolution in deterrence literature was unable to escape from the broad controversy raging within the social sciences as to the relative merits of traditionalism versus scientism. Within the field of international relations in general and deterrence studies in particular, two schools of thought can be discerned, roughly divided into advocates of the statistical-correlative approach<sup>4</sup> and advocates of the qualitative case study approach. The proponents of both approaches agree in principle on the need for empiricism, but after that initial agreement, their views diverge on how to go about fulfilling that need.

The more quantification minded empiricists tend toward superficial examination of a large number of cases in an effort to identify enduring patterns. Statistical tests are performed on a typically small number of variables in order to identify correlations. The major dependent variable is often deterrence success or failure, operationalized in various ways that are often inconsistent from study to study.

The more traditionally minded empiricists tend toward in-depth comparative analysis of a small number of cases, often only one or two. This approach, while

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<sup>4</sup>The term is borrowed from George and Smoke, p. 90.

still theory-oriented, by its very nature tends to emphasize the historical uniqueness of each case and to consider explicitly the role of personality variables.

The pattern of recent deterrence research has indicated that a sort of synthesis of the two schools of thought may be forthcoming. Compromise research strategies seem to be increasingly effective in taking good advantage of the favorable aspects, while minimizing the limitations, of each approach. The thesis of this chapter is that either approach is inadequate by itself because of the particular methodological problems posed by the subject matter of deterrence. Therefore, the most valuable studies will incorporate either an iterative research strategy or one involving an amalgam of the two contending approaches.

Sidney Verba expressed the essential task of all comparative research as "the search for simple rules to explain complex phenomena under conditions where there are few cases."<sup>5</sup> The particular problems of deterrence research seem to conform to that statement. At least four difficulties in deterrence research with methodological implications can be readily identified: (1) the relative impossibility of directly observing

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<sup>5</sup>Sidney Verba, "Some Dilemmas in Comparative Research," World Politics 20 (October 1967): 114.

the behavior in question, i.e., systematic and scientifically controlled observation of national decision makers making judgments in deterrence and/or crisis context; (2) existence of multiple variables, including elusive ones concerned with personality and group psychology; (3) existence of a statistically insignificant number of cases from which it is next to impossible to draw any sort of a random sample and yet retain validity; and (4) demand for policy relevant research conclusions, which tends to put a premium on explanation, prediction, and causality--the very sort of result the first three stumbling blocks make most difficult to attain.

Arend Lijphart identifies three essential research strategies available to the social sciences. In descending order of desirability, they are the experimental, statistical, and comparative methods.<sup>6</sup> In the experimental method, the experimental group is exposed to a stimulus while the control group is not. The two groups are compared and any difference is attributed to the stimulus. The impossibility of direct observation and scientific control rule out this

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<sup>6</sup>Arend Lijphart, "Comparative Politics and the Comparative Method," American Political Science Review 65 (September 1971): 683-4.



method for deterrence researchers.<sup>7</sup> The statistical method is defined as "conceptual (mathematical) manipulation of empirically observed data--which cannot be manipulated situationally as in experimental design." The element of control is introduced mathematically. The logic of the comparative method is the same as that of the ideal experimental method. The researcher in essence is forced into the comparative method in lieu of the statistical method due to the limited number of available cases; the population from which a statistical sample must be drawn is too small to ensure adequate mathematical control.<sup>8</sup>

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<sup>7</sup>Small group simulation and social-psychological laboratory research are attempts to get around this problem. In so doing, these methods raise equally grave epistemological questions and controversy concerning the validity of attempts to generalize conclusions, i.e., to apply laboratory findings to the broader context of international relations. A fuller discussion of these problems will be found in the next chapter.

<sup>8</sup>A similar typology of research strategies is presented by J. David Singer, "Theorists and Empiricists: The Two-Culture Problem in International Politics," in The Analysis of International Politics, eds. James N. Rosenau, Vincent Davis, and Maurice A. East (New York: Free Press, 1972), pp. 89-95. The laboratory experiment is characterized by high degree of manipulability of variables, resulting in relative ease of control. In the field experiment, the researcher gains in realism what he loses in ability to control; the method involves waiting until conditions in the real world are correct for his experiment or persuading decision makers to act in accordance with his design. The ex post facto or historical experiment

The nature of the subject matter and real world constraints, not the philosophical predisposition of the researcher, should determine the appropriate research strategy for any given inquiry. This point is often overlooked in the polemical debate between the traditionalists and scientists.<sup>9</sup> David Vital laments the fact that proponents of the scientific approach often concern themselves with "marginalia," presumably because their methods lead them to these topics.<sup>10</sup>

In any given research inquiry, every effort should be made to construct a valid design conforming as much as possible to the experimental method. When real world constraints act so as to make the ideal design impossible, then resort to statistical or comparative designs is justified.

On the face of it, statistical-correlative methods appear to have two great strengths vis-à-vis qualitative case study methods. First, they seem to be the weakest of the three, depending as it does on analytical control by the researcher.

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<sup>9</sup>Two typically partisan essays are Hedley Bull, "International Theory: The Case for a Classical Approach," World Politics 18 (April 1966): 361-77, and in reply, Morton A. Kaplan, "The New Great Debate: Traditionalism vs. Science in International Relations," World Politics 19 (October 1966): 1-20.

<sup>10</sup>David Vital, "On Approaches to the Study of International Relations; Or, Back to Machiavelli," World Politics 19 (July 1967): 554.

have a greater potential for cumulability, and second, results gained from statistical methods have claim to great validity associated with rigorous sampling techniques and statistical tests.

The problem of cumulability is a central one to all foreign policy research. If the efforts of the various researchers in the field cannot be coordinated and related to one another, then clearly there can be no progress in the discipline. The goal of cumulability is a powerful argument often used to justify the use of statistical methods. Rosenau notes that "case histories and broad assessments neither test nor yield hypotheses, so their conclusions cannot be placed in a larger context."<sup>11</sup> It is true that statistical methods by their very nature incorporate operationalized variables and rigorously tested hypotheses, but in actuality, knowledge gained from statistical designs has been no more cumutable or cumulated than knowledge from qualitative designs. The essential reason for this is lack of consistency between researchers in the definition of basic concepts; researchers often use the same words to identify concepts, but their findings are not cumutable because of basic differences in the way

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<sup>11</sup>James N. Rosenau, The Scientific Study of Foreign Policy (New York: Free Press, 1971), p. 26.



concepts are operationalized.

If statistical-correlative designs have not lived up to their theoretical potential for cumulatibility, then the proponents of qualitative methods have an even greater problem; not only has it been difficult to relate one study to another, but until recently there was little effort to systematically relate cases within one multiple-case design. This has been so because the single-case study has tended to dominate the field. Invariably, users of the single-case method have been historically oriented in their research focus. The primary motivation for undertaking a given research problem often has been to determine what happened and why in the particular instance, with little or no concern for applying the knowledge thus gained to a broader context or to theory construction. In contrast, qualitative research into deterrence cases has lately tended to regard the accumulation of historical data not as end in itself, but as evidence with relevance for theory construction beyond the case or cases of that particular study. The focus of the researcher thus determines whether a research effort is scientific or merely systematic.<sup>12</sup>

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<sup>12</sup>Rosenau makes the distinction as follows:  
". . . a scientific consciousness involves an automatic

The statistical-correlative approach enjoys prima facie scientific status, not because of the use of numbers, but because the method by definition implies the statistical comparison of a sample from some homogeneously defined population; that conclusions gained from examining the sample are applied to the more general population is part and parcel of the method. Such "automatic" generalization of results is not a definitional characteristic of the case study approach. Indeed, it takes considerable effort and discipline to make valid generalizations from a case study, since the typical inclusion of a plethora of human and historical factors presents a powerful argument for the historically unique rather than the theoretically general.

The need for discipline in the quest to upgrade the case study approach to scientific status has been recognized by several prominent political scientists. Verba calls for a "disciplined configurative" approach

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tendency to ask, 'of what larger pattern is this behavior an instance?' Because it treats every observation as an instance of a more general class of events, a scientific consciousness also impels speculation about the conditions under which the observed behavior would not have occurred or would have occurred in a different form. . . . Systematic but nonscientific analysis, on the other hand, does not give rise to consideration of the ways in which changing conditions might foster varying behavior. . . . The search is not for a larger pattern, but for inherent meaning." See Rosenau, p. 31.

in which the unique historical event is not ignored, but is treated as "one of a class of such events even if it happened only once. . . . Explanations may be tailored to the specific case, but they must be made of the same material and follow the same rules for tailoring."<sup>13</sup>

At this point, it is desirable to "empirically ground" the present discussion by examining some of the methodologically important research designs in the literature of deterrence. Methodology is the primary concern, but substantive results will be identified when they are of particular interest or of an unexpected nature. The reader should remain conscious of the four subject-induced research problems (impossibility of direct observation, existence of multiple variables, few number of cases available, and pressure for policy relevance) and three discipline-induced pressures (cumulability of research findings, scientific validity of results, and relevance to theory construction).

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<sup>13</sup>Verba, pp. 114-15. George and Smoke's focused comparison is a recent contribution to scientific case study methodology that consciously builds upon Verba's analysis. See George and Smoke, pp. 94-97. See also Harold Guetzkow, "The Potential of Case Study in Analyzing International Conflict," World Politics 14 (April 1962): 548-52.



### Significant Statistical-Correlative Designs

Bruce Russett's "The Calculus of Deterrence" was a landmark attempt to apply statistical methods to deterrence research. Six independent variables were examined relative to the dependent variable of deterrence outcome (dichotomized as success or failure) to determine what makes a threat credible. The three units of analysis incorporated were attacker (actually threatener), defender, and pawn. The seventeen deterrence instances examined conformed to the pattern of an attacker threatening a pawn, to which the defender "either had given, prior to the crisis, some indication of an intent to protect the pawn or made a commitment in time to prevent the threatened attack."<sup>14</sup> The inclusive time frame was 1935-1961, so the theoretically important distinction between nuclear and non-nuclear deterrence was not made. Of the six independent variables (existence of formal promise to defend; strategic superiority of defender; local superiority of defender; type of political system; pawn GNP as percentage of defender's; and economic, political, and military interdependence of pawn and defender), only the last proved to be statistically correlated with

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<sup>14</sup>Russett, p. 98.

deterrence success. Russett concluded, therefore, that "strengthening these bonds is, in effect, a strategy of raising the credibility of deterrence by increasing the loss one would suffer by not fulfilling a pledge."<sup>15</sup>

Clinton Fink, in a critique of Russett's article, correctly pointed out that deterrence effectiveness is a behavioral outcome, which was measured in the design, while credibility is a cognitive reaction of the attacker, and was unaddressed in the research.<sup>16</sup> More sophisticated research has extensively explored the link between the cognitive perceptions of decision makers and their observable behavior.<sup>17</sup> Russett himself underwent a change of heart concerning the relative merits of a purely correlative treatment vis-à-vis the intensive case study method. In "The Calculus of Deterrence" Russett maintained that "a

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<sup>15</sup>Ibid., p. 107.

<sup>16</sup>Clinton F. Fink, "More Calculations About Deterrence," Journal of Conflict Resolution 9 (March 1965): 57.

<sup>17</sup>Typical of the literature are Holsti, "The Belief System and National Images: A Case Study"; Robert Jervis, "Hypotheses on Misperception," World Politics 20 (April 1968): 454-9; also Dina A. Zinnes, Robert C. North, and Howard E. Koch, Jr., "Capability, Threat, and the Outbreak of War," in International Politics and Foreign Policy, ed. James N. Rosenau (New York: Free Press, 1961), pp. 469-77.

systematic comparison, undertaken cautiously, can provide certain insights that would escape an emphasis on the historical uniqueness of each case."<sup>18</sup> In a later work he alluded to the fact that he had made two substantial and unjustified "inferential leaps."

One is from the existence of such bonds between defender and pawn to their perception by the decisionmakers of the potential attack, and the second is from their perception to their entry in a significant way into the calculations of those who are deciding whether or not to press the attack. We are precisely in the middle of the old problem of confounding correlation with causation; the mere presence of the bonds does not prove that they influenced the outcome. . . . We must move from the examination of many cases to the study in depth of one or more particular instances to discover whether these factors really were observed by the decisionmakers and what importance they took on.<sup>19</sup>

In his earlier study, there seems to be substantial evidence that he did not observe his own warning to undertake the research "cautiously." Specifically at issue is his coding of the 1956 Suez Crisis as an instance of deterrence success for the defender, the Soviet Union, against the threatened (continued) attack by Britain and France on Egypt. While it is true that the Soviet Union communicated the

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<sup>18</sup>Russett, p. 100.

<sup>19</sup>Bruce M. Russett, "Pearl Harbor: Deterrence Theory and Decision Theory," Journal of Peace Research 2 (1967): 94.



only military threat against Britain and France, it is a gross misreading of history to assume that the Soviet threat caused the British and French withdrawal. Similarly, the United States was coded as an unsuccessful defender of Hungary against the Soviet Union in the 1956 invasion. In actuality, the United States only engaged in a rhetorical attempt to deter the Soviet Union from taking military action in Hungary.<sup>20</sup> The salient point is that use of statistical-correlative methods does not absolve the researcher from errors in qualitative analysis. Historical-analytical judgments must be made in coding data, operationalizing variables, and defining terms prior to the first number being tabulated. In a sense, the quantitative researcher has an even greater responsibility for making accurate historical judgments, since those judgments tend to be hidden and subsidiary to the main body of the report. The qualitative analyst regards these judgments as the crux of his effort, and they are exposed in a prominent place and subject to greater scrutiny. Any computer

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<sup>20</sup>George and Smoke, pp. 295-306, categorize the Hungarian case as a distinct case of nondeterrence by the United States. Eisenhower explicitly rejected making a deterrence attempt due to insufficient intelligence, the belief that the Soviets were highly motivated to defend their hegemonic position in Hungary, and consensus among American leaders that Hungary was not worth the risk of war.

programmer knows that output validity is directly contingent upon the validity of the program. In the same vein, the validity of quantitative research is contingent upon qualitative and analytic judgments made by the researcher prior to the performing of any statistical tests. There must be equal rigor in both endeavors.

In his concluding section, Russett makes generalizations that are unsupported by his empirical findings. Specifically, he concludes that a rationalistic cost-utility model actually governs the decision of the defender to pursue a "firm" policy that risks war. He presents the following summation:

Formally, the defender will pursue a firm policy only if, in his calculation:

$$V_f \cdot s + V_w \cdot (1-s) > V_r$$

where

- $V_f$  = the value of successful firmness (deterrence without war)
- $V_w$  = the value (usually negative) of the failure of firmness (war)
- $V_r$  = the value (usually negative) of retreat
- $s$  = the probability that firmness will be successful.<sup>21</sup>

Aside from the fact that the formal rationality assumption of deterrence theory has been largely

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<sup>21</sup>Russett, "Calculus of Deterrence," p. 106.

discounted,<sup>22</sup> Russett's conclusions are of methodological significance because they are typical of a general proclivity of statistical-correlative researchers to be less rigorous in their conclusions than they are in their manipulation of empirical data. It is often the case that the generalized conclusions presented do not follow from the body of the paper. Samuel Bleicher identifies three pressures on quantitative researchers to be less disciplined in their conclusions than in their statistical manipulations: (1) a "letdown phenomenon" occurs. After months or years of tedious research, often unrewarding in itself, there is a tendency to "speak one's piece," which often entails stepping beyond the bounds of the data collected; (2) the rigorously collected and statistically analyzed

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<sup>22</sup>Literature critical of the rationality assumption includes Sidney Verba, "Assumptions of Rationality and Non-Rationality in Models of the International System," World Politics 14 (October 1961): 93-117; Stan A. Kaplowitz, "An Experimental Test of a Rationalistic Theory of Deterrence," Journal of Conflict Resolution 17 (September 1973): 535-72; Joseph H. deRivera, The Psychological Dimension of Foreign Policy (Columbus: Charles E. Merrill, 1968); International Encyclopedia of the Social Sciences, 1968, s.v. "Deterrence," by Richard A. Brody; and Green, Deadly Logic; The Theory of Nuclear Deterrence. For a rationalistic analysis similar to Russett's, see Daniel Ellsberg, "The Crude Analysis of Strategic Choice," in Approaches to Measurement in International Relations, ed. John E. Mueller (New York: Meredith, 1969), pp. 288-94. (Originally published by the RAND Corporation, Santa Monica, Calif., as P-2183, 15 December 1960.)



data may not particularly show, reveal, or demonstrate anything beyond the trivial, obvious, or unexciting. However, the natural desire to reach conclusions is still present; (3) statistical designs do not make good reading. The quality of "readability," a characteristic of historical research, is generally lacking in correlative inquiry. "There is a temptation to add glittering generalities to rigorous research."<sup>23</sup> At this point, it is only proper to acknowledge that historically oriented researchers may succumb to the same pitfall; it just may be a more glaring error when the conclusions of a statistical design are inconsistent with the data, since the quantitative researchers are drawn to their methods in order to lend the weight of scientific rigor to their findings. It would be most unfair to take the position that unwarranted generalization is an inherent characteristic of the statistical-correlative approach when in fact it is a reflection of lack of discipline on the part of some of its proponents.

A second example of statistical-correlative research in which the conclusions are not supported by the data is K. J. Holsti's "Resolving International

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<sup>23</sup>Samuel A. Bleicher, "International Organization and the Preservation of Peace: A Comment on the Abuse of Methodology," International Organization 25 (Spring 1971): 304.

Conflict."<sup>24</sup> The data base was composed of seventy-seven conflicts between 1919 and 1964. Three conflicts (Kuwait-Iraq 1961, Turkey-Syria 1957, and Haiti-Dominican Republic) were omitted because of the inconclusive nature of available data. Five additional conflicts (Congo, Yemen, Cyprus, Vietnam, and Malaysia) were omitted because the outcome remained in doubt at the time of writing. Conflicts were coded according to procedures used in settlement attempts and by behavioral outcome.

Holsti draws the following conclusion which is supported by his data:

Most conflicts involve considerable bargaining between the antagonists and, in all the modes of resolution except award [through third party arbitration or adjudication], that bargaining can continue until some point of accommodation or submission is reached.<sup>25</sup>

However, he draws the following conclusion, which is not supported by his research:

No doubt where the vital interests of the major powers are directly incompatible, international organizations will continue to play a major role. But if they can impose their presence in less awesome quarrels, isolate the areas of confrontation, and impose ceasefire and armistice

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<sup>24</sup>K. J. Holsti, "Resolving International Conflict: A Taxonomy of Behavior and Some Figures on Procedures," Journal of Conflict Resolution 10 (September 1966): 272-96.

<sup>25</sup>Ibid., p. 291.

agreements, they will have made an important contribution to the maintenance of international peace and security.<sup>26</sup>

Surprisingly enough, Holsti was conscious of the limitations of his data, as he had previously stated that:

. . . these tables still do not indicate adequately the potential influence of international organizations in crisis situations, for there is no way to measure the informal pressures they place on disputants to resolve conflicts through, for example, direct negotiations.<sup>27</sup>

One can only speculate that for purposes of readability or the desire to end on a general and optimistic note, Holsti did not heed his own warning as to the limitation of his data. The statistical-correlative approach theoretically has a greater potential than traditional approaches for generating valid data expressed in probabilistic terms, but the very power of statistics requires of the researcher a degree of discipline that is often not to be found.

Situational analysis is a statistical method developed to avoid certain ambiguities associated with quantitative methods: (1) manipulative or mathematical ambiguity (possibility of producing varying results from the same data base); (2) ambiguity of results

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<sup>26</sup>Ibid.

<sup>27</sup>Ibid., p. 287.



("Sometimes the findings derived . . . represent only a partial summation of the theoretically warranted results. Other hypotheses, even other class of hypotheses, might equally be entertained."); and (3) ambiguity of application (the possibility of drawing incorrect inferences about the real world).<sup>28</sup>

In a pilot study to validate the method, forty-nine cases of "threatening action" during the period 1931-1965 were examined.<sup>29</sup> Twenty independent variables were intercorrelated and matched against the dichotomized dependent variable of success or failure of a committor power in gaining its objective in the face of obstructing behavior by a responder nation. Data was generated by the answers of twenty-four graduate students to a questionnaire. The use of this

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<sup>28</sup>Peter deLeon, James MacQueen, and Richard Rosecrance, "Situational Analysis in International Politics," Behavioral Science 14 (January 1969): 51.

<sup>29</sup>The researchers began with fifty-six cases, but seven were not considered due to unspecified "coding problems." Such total elimination of potentially relevant data is a ubiquitous characteristic of statistical-correlative designs and casts some degree of doubt upon the "randomness" of the ensuing sample. One is left to wonder to what degree the results are affected by the necessity of fitting complex international events into the sometimes Procrustean coding schemes required to facilitate mathematical manipulations of data. Indeed, deviant case analysis may generate theoretically important data from the study of just the sorts of anomalous cases that tend to be excluded from statistical designs.

highly subjective tertiary data source was justified as follows:

Admitting that the final truth will not be known [assuming there is no historically knowable final truth], it may be possible to concentrate on those aspects on which the major sources agree. To avoid the pitfalls of a parochial interpretation, it is also possible to code only that data on which a series of independent observers agree after surveying the literature.<sup>30</sup>

After statistical tests were performed on the data, public morale emerged as the single most consistent indicator of success ( $r = .496$ ). Other interesting results include the fact that the explanatory variable, quantity of military forces, was negatively correlated with success ( $r = -.441$ ), in direct opposition to the tenets of classical deterrence theory. That result, however, turns out to have been heavily influenced by the number of coded examples involving Hitler's Germany as committor nation pitted against the collectively militarily superior responders of Britain and France. Many statistical-correlative studies, in order to enhance statistical validity, have coded the Hitlerian cases of the 1930s. These cases, of course, have far-reaching effects on the conclusions.

A study published in 1974 introduced a significant innovation in order to increase statistical

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<sup>30</sup>Ibid., p. 54.

validity by expanding the sampling population.<sup>31</sup> The authors made a serious attempt to combine a reasonable degree of qualitative research, mostly through established secondary sources, with an extensive correlative design, in order to draw causal inferences expressed in probabilistic terms:

. . . correlation together with a strong sequential tendency creates a strong presumption in favor of the causal hypothesis that the precedent variable is the cause and the subsequent variable the effect.<sup>32</sup>

The authors' purpose was twofold: substantively, they wished to shed light on the power and limits of military deterrence as a strategy in international politics; methodologically, they offered the book as a working model of the cross-historical survey. Dependent variables were frequency of war, territorial growth, and territorial instability. Independent variables were defensive or offensive stance of the state in question and military, geographical,

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<sup>31</sup>Raoul Naroll, Vern L. Bullough, and Frada Naroll, Military Deterrence in History; A Pilot Cross-Historical Survey (Albany: State University of New York Press, 1974). A report on research in progress was Raoul Naroll, "Deterrence in History," in Theory and Research on the Causes of War, eds. Dean G. Pruitt and Richard C. Snyder (Englewood Cliffs, N.J.: Prentice-Hall, 1969), pp. 150-64.

<sup>32</sup>Naroll et al., p. xxv.



diplomatic, administrative, and general cultural situation. The initial hypothesis conformed to the general deterrence assumption of peace and stability through strength:

. . . states assuming a defensive stance with strong military preparations and favorable diplomatic, geographic, political, and cultural circumstances would tend to avoid war.<sup>33</sup>

The innovative sampling plan called for the definition of nine "paideias" or major influential civilizations. One randomly selected decade of each century for which usable historical records survive from each of the nine paideias was selected for coding, yielding 120 sampling periods. The authors, of course, have made a compromise, choosing to sacrifice some policy relevance for statistical validity through random sampling of a much broader than usual historical period. One can make a strong case that in coding temporally distant time frames, one might draw inferences about something, but that something will not be deterrence as it is presently conceptualized, involving as it does a massive punishment component against which there is virtually no defense. There are few instances in history in which the instantaneous elimination of entire societies was threatened.

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<sup>33</sup>Ibid., p. 5.

The authors do not directly address the trade-off between statistical validity and policy relevance, but they do recognize a discrepancy between the needs of the policy maker and the type of information generated by correlative studies in general:

Our cross-historical survey produces nomothetic results, but our statesmen at any given time are faced with an idiographic problem. In other words, our results may tell us what usually happens in circumstances of a given sort, but our statesmen, at any given time, are concerned with what is going to happen in a single, particular, unique situation. . . . For these reasons, statesmen must obviously continue to rely first of all on their experienced subjective judgments about the particular situations they face at particular times.<sup>34</sup>

The authors conclude that policy makers should be aware of historical trends that correlative studies bring out, which help to show direction, if not prediction. "They are worth a line or a paragraph in a National Security Council estimate of the situation."<sup>35</sup>

Substantively, the results of the study refute the commonly held correlations that support traditional deterrence theory. Specifically, when the defending state enjoyed a military advantage, there was no reduction in frequency of warfare. War was just as likely when defensively aligned states assembled larger armies than their rivals as when they did not.

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<sup>34</sup>Naroll, p. 162.

<sup>35</sup>Ibid., p. 163.

The only comfort our findings offer to the advocates of deterrence theory is to be found in our results about purely defensive armament--border fortifications. States enjoying strongly fortified borders may well turn out to have a slightly better chance of enjoying peace than those without.<sup>36</sup>

This study effectively illustrates the fact that all methodologies reflect a compromise between various goals. The particular orientation of the researcher often is the determining factor as to whether policy relevance or statistical validity is maximized at the relative expense of the other. The qualitative designs discussed in the following section tend to emphasize policy relevance. In the final analysis, the nature of this tradeoff may be the most important means by which the two schools may be differentiated. The distinction between "scientist" and "traditionalist" will become less meaningful as correlative researchers become increasingly responsive to the requirement for accurate qualitative coding decisions, while case study researchers consciously search for means of broadening their data base.

#### Significant Qualitative Case Study Designs

In direct contrast to the search for causality

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<sup>36</sup>Naroll et al., p. 330.



in the Naroll and Bullough study, Theodore Abel in 1941 expressed the essential traditionalist manifesto as follows:

War, too, is a phenomenon of growth and development and not the inevitable and invariant effect of some "cause," or "causes." As long as we search for quantitative laws about war the significance of the element of decision will escape us.<sup>37</sup>

Abel's study confirmed his thesis that the decision for war is usually taken far in advance of the outbreak of hostilities, as a result of a rational, calculating decision by elites. "In no case is the decision precipitated by emotional tensions, sentimentality, crowd behavior, or other irrational motivations."<sup>38</sup>

Though eschewing the quantitative approach, Abel sought a degree of statistical validity by examining in reasonable depth twenty-five major wars. Thus, while on the one hand, Abel was clearly distrustful of correlations and inferences of causality derived from statistical methods, he did recognize the value of empirically grounded inductive evidence.

The case study approach has historically been

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<sup>37</sup>Theodore Abel, "The Element of Decision in the Pattern of War," American Sociological Review 6 (December 1941): 853.

<sup>38</sup>*Ibid.*, p. 855.

linked to the traditionalist approach, partly through the criticism that monographic case studies have tended to generate no data or conclusions applicable to a wider class of events:

. . . most case studies have been oriented toward the unique features of the event or institution studied. Because of this orientation, they have seldom contributed directly to the development of general, abstract theory.<sup>39</sup>

Bruce Russett's 1967 research on the Japanese decision to attack Pearl Harbor is an example of a single case study in which a theoretically significant conclusion is drawn. Russett's substantive conclusion is that the Japanese decision to attack was not the result of irrationality or the belief that they could defeat the United States in a long war, but that the attack was the least disadvantageous way in which the Japanese could resolve a dilemma. If Japan remained at peace with the United States, she would have to suffer under an economically crippling embargo that would have the effects of thwarting her expansionist impulses and seriously weakening her ability to hold onto land already gained. If Japan were to go to war with the United States, the Japanese leaders recognized

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<sup>39</sup>Dean G. Pruitt and Richard C. Snyder, eds., Theory and Research on the Causes of War (Englewood Cliffs, N.J.: Prentice-Hall, 1969), p. 6.

that American industrial superiority would ensure a Japanese defeat were the war to be at all prolonged. In terms of Russett's earlier terminology, Japan chose to attack the defender, rather than the pawn (British and Dutch holdings in the Pacific). In essence, the Japanese decision makers perceived war as inevitable and judged that it should at least be initiated in a manner that would yield maximum initial advantage to Japan. Of wider theoretical significance, Russett concluded that any typology of deterrence outcomes must be expanded to include not only the option of attacking the pawn, but also of attacking the defender directly.<sup>40</sup> Russett did not code the Pearl Harbor attack as an instance of deterrence (success or failure) in "The Calculus of Deterrence," presumably because it was anomalous in terms of his scheme at that time. That the attack is now considered the result of Japan's being backed into a corner with no available appealing alternatives has great policy relevance. A prime tenet of nuclear "brinkmanship" is to ensure that the adversary is never backed into a position in which he may perceive his least disadvantageous option to be the initiation of war. Kennedy allowed the Soviet tanker

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<sup>40</sup>Russett, "Pearl Harbor," p. 99.



Bucharest to pass unchallenged on the first day of the Cuban blockade in order to increase Khrushchev's time available for decision making. "I don't want to put him in a corner from which he cannot escape."<sup>41</sup>

The Korean Decision<sup>42</sup> is an example of an intensive single-case analysis that establishes a link between pure history and theoretical analysis leading to generalized hypotheses. The first half of the book describes in narrative format the actions and perceptions of the major foreign policy and military advisers to Truman who participated in the decision to resist the North Korean attack. The period 24-30 June 1950 is covered in 170 pages. The second half of the book is concerned with the examination of a number of "empirically induced theoretical propositions" which correspond to hypotheses. The dual nature of case studies is addressed, as Paige states the book will appeal to two types of reader--professional students of politics interested in decision-making analysis and

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<sup>41</sup>Robert F. Kennedy, Thirteen Days; A Memoir of the Cuban Missile Crisis, pp. 77-78, cited by Graham T. Allison, Essence of Decision; Explaining the Cuban Missile Crisis (Boston: Little, Brown, 1971), p. 216.

<sup>42</sup>Glenn D. Paige, The Korean Decision (New York: Free Press, 1968).

those interested in the substance of the Korean case. Even though Paige examines only a single case, his orientation is not historical and traditional, but scientific and theoretical:

In summary, it would appear that the theoretical contribution of single-case analysis in political research will arise out of a combined process of internal theoretical induction, the application of external theoretical insights, and the progressive expansion of the set of empirical cases subjected to comparative examination.<sup>43</sup>

The Politics of Force<sup>44</sup> continues the trend toward scientific consciousness among qualitative investigators. Young calls for "an upgrading of empirical analysis relative to conceptual work, and a conscious effort to combine the two activities in fruitful ways."<sup>45</sup>

The Politics of Force contains four case studies: Berlin 1948-1949, Taiwan Straits' 1958, Berlin 1961, and Cuba 1962. The book incorporates a novel organizational format to facilitate comparative analysis. Each chapter begins with the explicit statement of a hypothesis concerning the nature of international crisis or crisis decision making. Then each case study is analyzed in

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<sup>43</sup>Ibid., p. 12.

<sup>44</sup>Oran F. Young, The Politics of Force; Bargaining During International Crises (Princeton: Princeton University Press, 1968).

<sup>45</sup>Ibid., p. viii.

each chapter only with reference to details that are specifically applicable to the hypothesis in question. Once again, the author has made a compromise, the nature of which reflects upon his orientation and what he considers most important. Focus is maintained on theoretical hypotheses while the unity of each case study is effectively shattered. Theory comes first and readability second--a dramatic departure from traditionalist priorities.

Young identifies certain problems associated with his method: (1) the researcher must be careful to specify the universe of cases to which the resultant generalizations apply; (2) it is necessary to specify the conditions under which the hypothesized relationships are expected to hold, thus narrowing the scope of the conclusions; (3) because achievement of strict comparisons across individual cases is difficult, utmost skill is called for in framing questions that are qualitatively comparable. In a statement significant for its resemblance to the thoughts of more statistically minded researchers, Young notes that "rather than proving empirical generalizations, in any absolute sense, therefore, the goal of analysis becomes the maximization of levels of confidence."<sup>46</sup>

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<sup>46</sup>Ibid., p. 420.



An interesting approach to the problem of conflict control is presented by Bloomfield and Leiss.<sup>47</sup> The authors proceed from the premise that peace and American national interests may be better served by a purposeful strategy of conflict control, with the prime aim not to win or guide local conflicts, but to prevent, contain, or terminate them. Immediately, the authors identify their central concern as normative policy relevance rather than value-free study. A system of mutually exclusive phases is overlaid onto the fourteen case histories of local conflicts that comprise the book. The local conflicts included are postwar instances of local conflict outside Europe since World War II, in which armed forces of the USSR and United States were not both involved. The goals of the "historic-analytic" method are:

- (a) to impose on real conflict data the phase structure postulated in our model of conflict;
- (b) to extract from each phase all identifiable factors deemed to have some relation to that particular pattern;
- (c) to specify for each such factor a policy-relevant control measure;
- and (d) finally to extract from the specific statements of those measures the generalized lesson for future conflict control.<sup>48</sup>

The policy relevant hypothesis integral to the

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<sup>47</sup>Lincoln P. Bloomfield and Amelia C. Leiss, Controlling Small Wars (New York: Alfred A. Knopf, 1969).

<sup>48</sup>Ibid., p. 44.

study is that "the course of local conflicts can be significantly altered by policy measures aimed at reinforcing violence-minimizing factors and offsetting violence-generating factors, as appropriate for the phase in question."<sup>49</sup> In the course of the study, the authors identify 425 conflict-control opportunities among the fourteen cases. Admitting that the method is subjective at many stages and not truly scientific, the authors note that the real test is "whether the process has taught us anything useful about conflict and about its control." The appeal to usefulness, rather than strict empirical validity, lends weight to the contention that Controlling Small Wars was undertaken as an example of model building.

The Limits of Coercive Diplomacy<sup>50</sup> is methodologically significant because it adopts much of the language and logic of the statistical-correlative approach while maintaining the richness and depth of analysis characteristic of qualitative methods. Consistent with Lijphart's comparative method and Singer's ex post facto experiment, the authors examine the Laos

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<sup>49</sup>Ibid., p. 16.

<sup>50</sup>Alexander L. George, David K. Hall, and William E. Simons, The Limits of Coercive Diplomacy: Laos, Cuba, Vietnam (Boston: Little, Brown, 1971).

crisis of 1960-1961, the Cuban missile crisis, and American diplomatic and military efforts in Vietnam 1964-1965 in terms of eight preconditions they hypothesized would correlate with successful application of coercive diplomacy. Thus their major research question was, "When is it reasonable for the policy maker to choose the strategy of coercive diplomacy or to entertain it seriously?" The eight hypothesized preconditions were strength of U.S. motivation, assymetry of motivation favoring the U.S., clarity of American objectives, sense of urgency to achieve the American objective, adequate domestic political support, usable military options, opponent's fear of unacceptable escalation, and clarity concerning the precise terms of settlement. The authors found that for the most part, the eight criteria were present in the instances of successful application of coercive diplomacy (Laos and Cuba) and absent in the unsuccessful case of Vietnam.

The relationship between deterrence and coercive diplomacy was defined in terms similar to those used to distinguish between deterrence and compellence. Thus, the authors define deterrence as an "effort to dissuade an opponent from doing something he has not started to do," and coercive diplomacy as those tactics employed afterwards "either to persuade him merely to halt or to



undo his actions."<sup>51</sup> While deterrence primarily involves the threat of military force, coercive diplomacy may entail a wide range of diplomatic and military tactics.

An empirical attack on the rationality assumption of deterrence theory is mounted by Ole Holsti, whose thesis is that decision makers will not act as rationally, deliberately, and correctly in times of stress as in times in which the environment is not stressful.<sup>52</sup>

Holsti, through content analysis of diplomatic communications, examined the 1914 crisis and the Cuban missile crisis for perceptions of hostility, time pressure, and alternatives. A separate analysis of financial indices was used as a validity experiment and correlated against results gained from the content analysis. The hallmark of scientific consciousness is Holsti's focus on his empirical results as evidence supporting a general theory. There existed at the time

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<sup>51</sup>Ibid., p. 24.

<sup>52</sup>"... the theory of deterrence . . . first proposes that we should frustrate our opponents by frightening them very badly and that we should then rely on their cool-headed rationality for our survival." See Ole R. Holsti, Crisis Escalation War (Montreal: McGill-Queen's University Press, 1972), p. 9, cited by Deutsch, The Nerves of Government, p. 70.

of writing a quite extensive body of literature devoted to the two crises Holsti was concerned with, and his intention was not to add to that body of essentially historical knowledge, but to learn something about the perceptions and actions of policy makers under stress.

The final research design to be discussed, Deterrence in American Foreign Policy, represents a culmination of many trends in qualitative inquiry that have been touched on so far. Noting that "remarkably few efforts have been made to weigh carefully the available historical experience in applying deterrence," George and Smoke use their method of focused comparison to develop an "inductively derived theory of deterrence [that] will emphasize the limitations and risks of deterrence strategy."<sup>53</sup> Focused comparison is a conscious attempt to occupy the middle ground between the two contending approaches. Focused comparison gains cumulability by examining in reasonable detail as many pertinent cases as possible (George and Smoke examine eleven postwar American deterrence attempts), asking a set of common questions within each case study. The nature of the questions asked is determined by policy relevance, rather than ease of measurability. Like all

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<sup>53</sup>George and Smoke, pp. 2-3.

methodologies, focused comparison is a compromise, and the authors freely admit that the study does not employ a complete or representative number of cases, thus making it impossible to determine "relative frequency with which any given conjunction of independent and dependent variables occurs."<sup>54</sup> Because of the statistically insignificant number of cases, the study enjoys a lower degree of formal verification than, say, the Naroll, Bullough, and Naroll study. Though George and Smoke explicitly identify variables, they choose to maintain the integrity of each case study, rather than adopt Oran Young's more fragmented approach. The authors place a high premium on readability, as they choose not to restate each of the eight common questions in each case, but to construct an "implicit framework of questions and answers within the text of each case study."<sup>55</sup> The interests of comparability, cumulability, and science would have been more directly served by the explicit asking and answering of each question within each case, but this would have made more tedious reading. The authors therefore incorporate the traditionalist view that if policy makers are unable or unwilling to read their book, it matters little how scientific or

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<sup>54</sup>Ibid., p. 96.

<sup>55</sup>Ibid., p. 103.



rigorous it is in method.

The title of the concluding chapter, "From Deterrence to Influence in Theory and Practice," anticipates the major conclusion of the study--that deterrence as it has been operationalized in American postwar foreign policy has had the effect of narrowing our coercive policy options. Negotiation and conciliation have taken a back seat to military threat, and the result has often been deterrence failure. The authors attribute the frequent failure of deterrence to a disregard of fundamental questions regarding the nature and valuation of interests. Classical deterrence theorists, working within an essentially apolitical context, have largely ignored the empirically demonstrable fact that deterrence only works when definite in character and limited in application to areas where the guarantor has real interests.<sup>56</sup>

This brief tour of empirical deterrence studies has demonstrated that there is no perfect methodology. All methods are compromises, and the nature of the tradeoff in each particular study is a reflection of the author's orientation as well as the nature of the subject he is dealing with. In general, the

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<sup>56</sup>Ibid., pp. 556-59.

statistical-correlative approach tends to maximize cumulability and scientific validity in exchange for decreased policy relevance and readability. The qualitative case study approach reflects an overriding concern with policy relevance and a reluctance to expand the number of cases in order to gain statistical validity at the cost of weakening the analogy.

The two most recent major empirical studies of deterrence, Military Deterrence in History and Deterrence in American Foreign Policy, though one is correlative and the other qualitative, share a common scientific predisposition. The dogmatic taking of sides, either traditional or scientific, has been left behind in the realization that future effective compromise research strategies must borrow heavily from both camps. Hopefully, response to the challenging nature of the subject matter will spell an end to the ideologic approach to methodology.

#### Iterative Research Strategies and the Scientific Uses of Case Studies

Any research design is an amalgam of empirical science and the insight, wisdom, and judgment that traditionalists claim as their special domain. "Our mission in both teaching and research is nothing more

than an effective amalgamation of insight with evidence, and of substance with technique."<sup>57</sup> The most subjective wisdom and insightful judgment are the results of a prior process of observation combined with the tools of logic and internalized rules of evidence. Quantitative methods depend upon qualitative decisions in constructing typologies, coding data, and operationalizing variables and constants. In the same vein, qualitative researchers implicitly hold certain variables constant and allow others to vary, depending on their selection of cases. Thus, the two approaches are closer to one another than is often realized. The present task is to determine ways in which the two strategies may be combined to solve actual research problems in deterrence.

Bruce Russett has proposed an iterative research strategy as a means of taking advantage of the unique characteristics of each approach. A typical iterative process utilizes case studies in order to identify variables and generate hypotheses.<sup>58</sup> Next, correlational

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<sup>57</sup>J. David Singer, "The Incomplete Theorist: Insight Without Evidence," in Contending Approaches to International Politics, eds. Klaus Knorr and James N. Rosenau (Princeton: Princeton University Press, 1969), p. 67.

<sup>58</sup>"It is important to note both that most hypotheses later investigated with correlational techniques are originally generated from case-study material, and that such generation is merely a beginning, not an



analysis provides the best method for the systematic testing of those hypotheses. Finally, a return to the case study is called for in order to check on proper coding, to test alternative hypotheses that are undifferentiable by correlation analysis, and to perform the best analysis possible in those cases in which too few instances exist for conclusive correlational analysis.<sup>59</sup>

A further complementary function of case study analysis is the uncovering of causal relationships between variables. Russett contends that qualitative analysis is particularly useful in the examination of temporal sequence and elimination of spurious correlations.<sup>60</sup> Singer notes that causal propositions are required for theory construction:

At the minimum, a theory must attempt to explain some particular class of outcomes, and not merely deal with one set of variables that do, or might, correlate with such outcomes.<sup>61</sup>

The problem of causality is one that continues to generate much philosophical controversy, and it is

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end point, in the scientific process." See Bruce M. Russett, "International Behavior Research: Case Studies and Cumulation," in Approaches to the Study of Political Science, eds. Michael Haas and Henry S. Kariel (Scranton: Chandler, 1970), p. 428.

<sup>59</sup>Ibid., pp. 429-30.

<sup>60</sup>Ibid.

<sup>61</sup>Singer, "The Incomplete Theorist," p. 89.

beyond the scope of this paper to delve deeply into the concept. It is the author's contention, however, that causality is of such an elusive nature that neither correlational nor case study methods alone are sufficient for its discovery.<sup>62</sup> Proof of temporal sequence and correlation are necessary but not sufficient conditions for the demonstration of causality.<sup>63</sup> Perception and the link between cognitive process and behavioral action must be addressed in order to make causal inferences, and at present that sort of information is more likely to be generated by qualitative analysis.

In similar fashion to Russett, Lijphart alludes to the hypothesis generation function of case study

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<sup>62</sup>A mathematical means of determining causality from a correlational design is presented in H. M. Blalock, Jr., "Correlational Analysis and Causal Inferences," *American Anthropologist* 62 (August 1960): 624-31. Certain assumptions required to make the method "work" relegate the article to more theoretical than practical importance. In addition, several hundred cases are required to demonstrate causality in a four-variable model.

<sup>63</sup>The constant-conjunction view of causation "does not convey the productivity or efficacy of causation; it does not, in short, say that the effect happens to be produced by the cause, but only that it is regularly conjoined to it. . . . A law of correlation is not a causal law, because it does not state that a given entity (or a change in it) is produced by another entity (or by a change in it), but just that the two are regularly associated." See Mario Bunge, Causality: The Place of the Causal Principle in Modern Science (Cambridge: Harvard University Press, 1959), p. 44.

analysis as the first step in an iterative sequence:

. . . given the inevitable scarcity of time, energy, and financial resources, the intensive comparative analysis of a few cases may be more promising than a more superficial statistical analysis of many cases. In such a situation the most fruitful approach would be to regard the comparative analysis as the first stage of research in which hypotheses are carefully formulated, and the statistical analysis as the second stage, in which these hypotheses are tested in as large a sample size as possible.<sup>64</sup>

In addition to traditional atheoretical uses, Lijphart identifies three scientifically relevant functions of case studies: (1) hypothesis-generation, which is most useful in areas previously devoid of theory; (2) theory-confirmation (or infirming) in which a case study is used to test a theoretical proposition; and (3) deviant case analysis, involving "studies of single cases that are known to deviate from established generalization," in order to uncover additional relevant variables not previously considered or to refine the operational definition of variables. Deviant case analysis has great theoretical value because it often functions in such a way as to weaken the original proposition and to suggest a stronger modified proposition.<sup>65</sup>

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<sup>64</sup>Lijphart, p. 685.

<sup>65</sup>Ibid., pp. 691-92.



James Fesler notes that in addition to generating hypotheses, "case studies may encourage caution in abstract generalization by illustrating the complexity, particularly the multiplicity, of variables in each significant problem confronted us in the real world."<sup>66</sup>

Thus, an iterative research strategy incorporates qualitative case study analysis for the purpose of hypothesis generation, theory confirmation, deviant case analysis, and for keeping correlative research linked to the real world by constantly reminding the research (and reader) that simplifications have been made in the interest of correlative research. Statistical-correlative methods are indispensable for imputing scientific validity to research findings and for defining relationships between variables in terms that will enhance cumulability of knowledge. Knowledge generated by both approaches is essential to the discovery of causal inferences.

The purpose of the foregoing discussion has been to provide a philosophical background against which the

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<sup>66</sup>James W. Fesler, "The Case Method in Political Science," in Essays on the Case Method in Public Administration, ed. Edwin A. Bock (New York: Inter-University Case Program, 1962), pp. 78-79.

specific methodology of the present paper may be evaluated.

### Methodology of the Present Paper

The goal of the present paper is first and foremost to develop an empirical basis for the study of ambiguity in deterrence threats. The Suez case study serves the following functions:

1. Identification and definition of relevant variables. A methodologic innovation of the paper is the treatment of ambiguity as both a dependent and independent variable, in contrast to the bulk of the literature, which has tended to conceptualize ambiguity as a readily manipulable policy tool rather than as an indicator of certain preconditions or determinants.<sup>67</sup>
2. Hypothesis generation. Hypotheses supported by evidence from the case study will be put forth, thus establishing an initial base upon which rigorous correlational designs or case studies with an expanded data base may be built.

The way in which deterrence practice differs from theory will be brought out in detail. Of

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<sup>67</sup>In Robert Jervis' terminology, ambiguity will be treated as an index, as well as a signal. See Jervis, Logic of Images, p. 18.

methodological significance is the fact that the demonstration of this difference hinges upon the introduction of a key "ecological variable," the existence of important subsidiary motives for threat communication. As will be discussed in detail in the next chapter, the consensus of the literature is that clarity of threatening communications enhances credibility and is correlated with deterrence success. Ambiguity of threats is seen as having the effect of detracting from credibility and is associated with deterrence failure. How then is one to explain the fact that deterrence threats in actuality frequently contain major elements of ambiguity? On the face of it, there would seem to be a paradox in that nations employing deterrent threats have often eschewed the clarity that theory tells us should enhance the credibility and effectiveness of their threats. It is the thesis of this paper that the paradox is only a function of inadequate theoretical analysis of ambiguity. In other words, nations employ ambiguity because threats in a deterrence format have a whole host of functions other than strictly military deterrence. Ambiguity, while detracting from deterrence, often serves to maximize other goals. Thus, there is no paradox in the existential world; actual national behavior only seems



paradoxical in relation to presently inadequate theory.

Deterrence theory "bereft of any ecological variables" (environmental variables outside the two-party/one-issue model) is consistent with the apolitical military conception of deterrence that has been pre-occupied with capability (as in worst-case planning), rather than intent.

By tending to ignore such variables, we attribute an inordinate degree of autonomy to our units of analysis, and . . . assume the accuracy of implied propositions which have yet to be demonstrated.<sup>68</sup>

Deterrence theory has indeed assumed a degree of theoretical autonomy from the more general environment of international politics within which it operates. Empirical research into deterrence behavior is the most powerful way to demonstrate the saliency of an explanatory variable lying outside the realm of classic deterrence theory.

Because of the inductive logic of the paper, the function of evidence is to demonstrate the empirically possible. Theoretical value is gained through the introduction of variables not previously considered. The existence of a historical case that is inadequately explained by existing theory will expose the need for an expansion of the theoretical basis for

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<sup>68</sup>Singer, "The Incomplete Theorist," p. 92.

deterrence behavior.

The substance of the case study centers on Soviet deterrent threats against Britain, France, and Israel during the course of the 1956 Suez Crisis. Since this case involves specifically directed and communicated threats in a well-defined crisis situation, ambiguity may be examined as both a dependent and independent variable. The thesis of the study is that nondeterrent motivations of the threat source are a prime determinant of ambiguity. The subsidiary motivations behind the Soviet threats will be examined in detail, as will the most interesting relationship between Russian threats and actual nuclear capabilities.

The methodology of this paper stems from the deep-seated belief that the qualitative case study approach, because of its inherent flexibility, is useful in bridging the gap between simplified theory and the complexities of the real world. The widely accepted theoretical model of deterrence holds that a threat involves only two actors and one issue, while empirical reference to actual deterrence behavior introduces multiple actors, multiple issues, and complicated interactions.

### CHAPTER III

#### CRITICAL SURVEY OF LITERATURE

The following survey of literature brings together the major theoretical formulations concerning deterrence ambiguity which heretofore have been scattered throughout the literature of international relations. The reader should keep in mind the dual focus of the chapter; that certain substantive conclusions concerning ambiguity have been drawn is every bit of interest in the present context as is the substance of those conclusions. The eclectic approach of the chapter is a reflection of the character of the existing body of literature. In the general absence of direct empirical data, theorists have tended to borrow heavily from such analogous contexts as labor-management negotiations, general international diplomacy, and small group simulation. Because validity of any particular analogy may be open to question, the author will make explicit each context from which data is drawn. Any transfer of conclusions between contexts is understood to be tentative and cautiously done.



### Utility of Clarity

Common sense provides a strong prima facie case for the utility of clarity in threat communications.

"Your chances of influencing another to do what you want are considerably enhanced if the other clearly knows what you want him to do."<sup>1</sup> Similarly,

In a power situation there must be clear communication between the person who initiates policy and the person who must comply. . . . For it [power] to exist, the person threatened must comprehend the alternatives which face him in choosing between compliance and non-compliance.<sup>2</sup>

Inasmuch as a threat is a form of communication designed to influence the target's perceptions in certain ways, it would appear that the most utility is to be gained through the statement of demand and sanction in as clear a manner as possible. Traditional values from the world of international diplomacy reinforce the need for clarity in all communications: "In

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<sup>1</sup>"The attempt to comply with a vague proposal becomes more costly. Being good in every way that I can think of in order to have some chance of being good in the way that you are thinking of is likely to involve much more effort than doing something that is clearly defined as what you want, more effort than I may be willing to expend." See Morton Deutsch, The Resolution of Conflict (New Haven: Yale University Press, 1973), pp. 136-37.

<sup>2</sup>Peter Bachrach and Morton S. Baratz, "Decisions and Nondecisions: An Analytical Framework," American Political Science Review 57 (September 1963): 634.

communication between governments precision is the first requirement of effectiveness."<sup>3</sup>

Social psychology research has demonstrated that specific instructions are more effective than general instructions in eliciting a behavioral outcome. In an experiment in which groups of subjects were exposed to various degrees of fear arousal in appeals to get a tetanus shot, it was found that "providing a clear possibility or plan for action can reduce the inhibitory properties of certain fear states."<sup>4</sup> Independent of level of fear arousal, subjects who were given specific instructions as to how, when, and where to get a shot did so more often than subjects who were given only general instructions. If the results of this experiment are transferrable to a threat system, then they would correspond to the conclusion that regardless of fear arousal generated by a given sanction, fulfillment of the demand will be made more likely by increasing its clarity.

Note that the above formulation only calls for

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<sup>3</sup>George F. Kennan, Soviet-American Relations, 1917-1920, vol. 2: The Decision to Intervene (Princeton, N.J.: Princeton University Press, 1958), p. 234.

<sup>4</sup>Howard Leventhal, Robert Singer, and Susan Jones, "Effects of Fear and Specificity of Recommendation Upon Attitudes and Behavior," Journal of Personality and Social Psychology 2 (July 1965): 28.

clarity of demand, while clarity of sanction is not addressed. J. David Singer, in stating the communications requirements of a deterrent threat, specifically calls for clarity of demand, but allows for ambiguity of sanction:

B must be provided with two categories of information. One is the precise nature of the act which A prefers to see B take (x) or avoid (o); without this information B is unable to respond in a mutually advantageous fashion. The other is the availability of alternatives, and this is particularly relevant in the dissuasion situation.<sup>5</sup>

Singer's requirement for maximum clarity in communicating the demand is well within the mainstream of the literature, but he ignores the utility of defining the demand ambiguously when the source anticipates a conservative interpretation by the target. Singer is clearly concerned with objective, rather than subjective clarity. Restated in perceptual terms, Singer's formulation would read, "B must perceive two categories of information. . . ." How clearly the target perceives the demand and the sanction is a judgment affected by inputs from many sources such as the target's own intelligence efforts, statements and actions of allies and other adversaries, the general

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<sup>5</sup>J. David Singer, "Inter-Nation Influence: A Formal Model," American Political Science Review 57 (June 1963): 430.



structure of the situation, and domestic factors. One cannot equate objective and subjective clarity without referring to environmental variables that are uncontrolled by the threat source.

David Baldwin formulated his own communications requirements for a threat in perceptual terms:

If A wants to use threats or promises to get B to do X, he must ensure that B has answers to three questions: (1) what does A want B to do, (2) what will A do if B does not comply, and (3) what will A do if B does comply? . . . This information need not be provided by A. It is only necessary that B have it, not that A provide it.<sup>6</sup>

Because many forces may act on an objectively clear communication so as to make the subjective perception of meaning or intent ambiguous or incorrect, the source, if his goal is to communicate with clarity, must take extra steps toward that end.

A fact plus an explanation of its significance are more likely to communicate than either the fact alone or the interpretative generalization alone. . . . Deterrent information may fail if it does not conform to that principle. If it consists only of a warning statement or only of a particular weapons action each unlinked to the other, it may not communicate as intended.<sup>7</sup>

The need for action to reinforce verbal

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<sup>6</sup>Baldwin, p. 75.

<sup>7</sup>Ithiel de Sola Pool, "Deterrence as an Influence Process," in Theory and Research on the Causes of War, eds. Dean G. Pruitt and Richard C. Snyder, p. 193.

communication is often cited, but a less obvious requirement is the need for verbal clarity in order to reinforce possibly ambiguous action. Noting that the first move of a planned series is a "common instance of a military fact that does not communicate without interpretation," Ithiel de Sola Pool states:

To the actor who knows his total plan, the significance of the first moves may seem glaringly obvious. It is hard for him to avoid overestimating how much he is communicating. Redundance and more redundance is usually necessary.<sup>8</sup>

A related function of clarity, especially in nuclear deterrence, is to make up for "lack of empirical validation of signals." Jervis notes that nuclear threats may tend to have less and less impact, since none have been carried out. "In the case of threats of all-out nuclear war, one cannot 'reinvigorate' the signals by following them with the indicated action."<sup>9</sup> This leads to a major theoretical function of clarity in deterrence threats--the enhancement of credibility.

Maximum clarity in threats tends to produce

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<sup>8</sup>Ibid. An example given is that "An American buildup of conventional NATO forces or of mobile retaliatory forces could be a first step toward a later reduction of more provocative forces, but unless unambiguously labeled, it could be interpreted as an over-all force buildup." In such a case, the target would seek out valid indices and look upon signals with suspicion.

<sup>9</sup>Jervis, Logic of Images, p. 226.

maximum credibility by engaging values such as national prestige and bargaining reputation.<sup>10</sup> Thus, statements of a clear threat actually create as well as communicate commitment. Sometimes the line between the two functions is finely drawn.

The primary means by which clarity increases credibility is through communication of automatism of response:

His [the source's] credibility increases as his array of alternatives decreases. By backing himself into a corner--"I have no choice"--the threatener maximizes credibility at the cost of flexibility.<sup>11</sup>

The use of automatism is not peculiar to deterrence, but rather is a longstanding bargaining tactic:

A negotiator may effectively influence an opponent by communicating (and demonstrating) that he is irretrievably committed to a position because of domestic, ideological or scientific-legal constraints.<sup>12</sup>

The overall effect of a negotiating strategy of automatism is thus to remove responsibility from the

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<sup>10</sup>Snyder, "Crisis Bargaining," p. 247.

<sup>11</sup>E. James Lieberman, "Threat and Assurance in the Conduct of Conflict," in International Conflict and Behavioral Science, ed. Roger Fisher (New York: Basic Books, 1964), p. 113.

<sup>12</sup>Daniel Druckman, Human Factors in International Negotiations: Social-Psychological Aspects of International Conflict (Beverly Hills: Sage, 1973), p. 33.



negotiator if his deterrence attempt is challenged. Denial of the source's ability to restrain his own actions in case of deterrence failure is often referred to as the "rationality of irrationality."<sup>13</sup> The strategy of automatism is irrational in its means, but rational in its goal. It requires that the source "leave as little room as possible for judgment or discretion in carrying out the threat,"<sup>14</sup> clearly a denial of rationality; yet, by the very level of commitment the strategy communicates, the possibility of war is decreased--a rational goal. The ideal bargaining position, in order to maximize rationality of both means and ends, would be to effectively communicate (cause the perception of) complete automatism, while still retaining flexibility of action in actuality.

Automatism, far from being an exclusively theoretical concept, has been purposefully employed on numerous occasions. Henry Kissinger notes that

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<sup>13</sup>Herman Kahn goes so far as to describe a Rationality of Irrationality war, which "corresponds to a situation in which neither side really believes the issue is big enough to go to war but both sides are willing to use some partial or total committal strategy to force the other side to back down; as a result they may end up in a war that they would not have gone into if either side had realized ahead of time that the other side would not back down even under pressure." See Kahn, p. 293.

<sup>14</sup>Schelling, p. 40.

permanently stationed American troops in Europe function as a hostage, guaranteeing a U.S. response to a Soviet military incursion.

It is a reminder to the Communist leaders that in case of a Soviet attack we have to some extent resigned control over our actions. The rationality of resistance will no longer be the issue. There will not be time for fine calculations. Our deployment ensures a measure of automatism in our response which no verbal commitment could achieve.<sup>15</sup> (Italics mine.)

Western European nervousness about a possible American withdrawal from Europe can be interpreted as a general recognition that the American deterrence posture would stand to lose much credibility once the element of automatism is removed. The American Berlin Brigade, whose day-to-day function is more ceremonial than martial, nevertheless functions not as a symbol of American commitment, but as a guarantor of it as a hostage. As such, it effectively creates and communicates commitment.

Chiang Kai-shek employed a strategy of automatism in 1958 when he moved a large proportion of his troops to the offshore islands, knowing it would be impractical to evacuate them under fire. He thus left the United States with no choice but to assist in the defense of

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<sup>15</sup>Henry A. Kissinger, The Necessity for Choice: Prospects of American Foreign Policy (New York: Harper, 1961), pp. 54-55.

the offshore islands since their loss would have jeopardized the security of Formosa. In and of itself, the movement of a critical portion of the Nationalist army to Quemoy, where it would be subject to blockade and Communist artillery assault, was clearly irrational. However, the goal of the irrational act was rational--the reluctant commitment of the United States to a policy of only marginal national interest.<sup>16</sup>

An interesting example illustrating the risks of automatism is also provided by the Quemoy crisis. On 7 September 1958, Khrushchev, perceiving a general decrease in tension and reduced chance of general war, issued the following explicit threat in a letter to Eisenhower:

An attack on the Chinese People's Republic, which is a great ally, friend, and neighbor of our country, is an attack on the Soviet Union.<sup>17</sup>

Very quickly, the level of automatism implied in the threat began to frighten the Soviets themselves, who evidently became aware that they could be dragged into war with the United States over the offshore islands because of an indiscretion or premeditated act

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<sup>16</sup>Thomas C. Schelling, Arms and Influence (New Haven: Yale University Press, 1966), p. 43.

<sup>17</sup>Pravda, 9 September 1958, cited by John R. Thomas, "Soviet Behavior in the Quemoy Crisis of 1958," Orbis 6 (Spring 1962): 50.



of the PRC. Beginning four days later, the level of automatism was gradually reduced by subsequent "clarifications" of the original statement. Khrushchev was careful not to reference the Sino-Soviet Pact, since the Pact provided for automatic response by one party if the other were attacked.<sup>18</sup> Soviet reluctance to employ clear verbal threats to communicate a strategy of automatism is significant because it provides an actual case in which clarity of threat is a dependent variable. The final form of the Soviet deterrent threat was ambiguous, providing a true reflection of Soviet commitment to go to war to assist the PRC in regaining the offshore islands. The level of commitment was low, and a strategy of automatism could not be employed. Thus, in at least one documented case, commitment could not be created by the mere verbalization of it. Degree of clarity was clearly dependent upon degree of existing political commitment, and was not a readily manipulable independent variable.

Automatism may be either mechanical or administrative.<sup>19</sup> Mechanical automatism is most graphically

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<sup>18</sup>Ibid., pp. 52-53.

<sup>19</sup>Glenn H. Snyder, "Deterrence and Power," Journal of Conflict Resolution 4 (June 1960): 173.

illustrated by Herman Kahn's Doomsday Machine.<sup>20</sup> For obvious reasons, the Doomsday Machine is not a rational or reasonable policy option for any country, but it effectively illustrates the conceptually ideal form of mechanical automatism. More realistically, Snyder notes that "complete mechanical automation is probably impossible in military affairs," but that the use of ground troops as a "trip-wire" for nuclear retaliation is a kind of automating device.<sup>21</sup>

Administrative automatism, on the other hand, is manifested by verbal communication of commitment without reinforcing actions. Snyder presents the Eisenhower Doctrine as an example of administrative automatism by virtue of the provision that United States intervention is to take place at the request of the country attacked.<sup>22</sup> Thus, the commitment is irrational in that the United States would appear to surrender its

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<sup>20</sup>"The device is protected from enemy action (perhaps by being put thousands of feet underground) and then connected to a computer which is in turn connected, by a reliable communication system, to hundreds of sensory devices all over the United States. The computer would then be programmed so that if, say, five nuclear bombs exploded over the United States, the device would be triggered and the earth destroyed." See Kahn, p. 145.

<sup>21</sup>Snyder, "Deterrence and Power," loc. cit.

<sup>22</sup>Ibid.

option of not militarily supporting a country requesting help. Administrative automatism is tied closely to the nonsituational view of international commitment that is part and parcel of the American collective security system. In direct opposition is the situational view of commitment, most vehemently supported by France under de Gaulle. In general terms, France refuses to recognize the validity of administrative automatism, while the United States regards its efficacy as a prime tenet of its foreign policy.<sup>23</sup>

American policy makers are generally suspicious of ambiguity in deterrence threats. Henry Kissinger states three reasons why uncertainty in nuclear threats should be minimized. First, it has not worked in the past, in that ambiguous verbalization of American commitment has failed to prevent the Berlin Blockade, the Korean War, the Soviet invasion of Hungary, or "the constant threat of missile and nuclear attacks."<sup>24</sup> Second, enough ambiguity as to probability of reaction already exists naturally in the situation. To add to it consciously would have the effect of reducing

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<sup>23</sup>Franklin B. Weinstein, "The Concept of a Commitment in International Relations," Journal of Conflict Resolution 13 (March 1969): 39-56.

<sup>24</sup>Kissinger, p. 52.



credibility drastically:

Regardless of what we say, there always exists the possibility that we might recoil at the last moment before the prospects of a cataclysm. To strive for ambiguity deliberately must magnify these fears. Our all-out deterrent may work for a while longer despite its increasing lack of credibility. But we should consider this a fortunate bonus. To make of ambiguity a principle of conduct is to court disaster.<sup>25</sup>

Third, Kissinger defines two types of uncertainty: uncertainty as to range of resistance and uncertainty as to whether we will resist at all. He maintains the latter "must weaken deterrence because it leaves open the possibility of non-resistance."<sup>26</sup> All three criticisms of the use of ambiguity rely upon the key assumption that degree of clarity is a readily manipulable tool in the hands of policy makers and need neither reflect nor be dependent upon the level of existing political commitment. .

Herman Kahn provides an almost made to order example of fallacious reasoning in assuming that clarity of threat is a panacea for all strategic ills. To solve the problem of credibility of the American nuclear deterrent on behalf of Western Europe, Kahn proposes that a European Strategic Defense Community (ESDC) be established. The ESDC would incorporate a

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<sup>25</sup>Ibid., p. 53.

<sup>26</sup>Ibid., p. 54.

doctrine of "proportionate nuclear reprisal." Standing orders (presumably well publicized in order to gain administrative automatism) would call for a tit for tat response to any nuclear attack on the Atlantic Community. Command and control would be made reliable by a "fail-dangerous" system in which any nuclear attack on command and control would be met by a drastically increased nuclear response.

While many details remain to be discussed, I would judge that with proper design and deployment and such a [announced] targetting doctrine, one could probably solve most if not all the command-and-control, vulnerability, and credibility problems of an ESDC.<sup>27</sup>

Kahn assumes that such a doctrine of administrative automatism could be employed without addressing the underlying existing problems of nuclear cooperation and credibility of response. Clarity and ambiguity are not nearly so manipulable as Kahn assumes. The level of perceived clarity is closely tied to real clarity of commitment. There can be only a narrow range of divergence between the levels of actual and communicated commitment to what may be an irrational strategy.

It may be useful at this point to examine the

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<sup>27</sup>Herman Kahn, On Escalation; Metaphors and Scenarios (New York: Praeger, 1965), p. 267.

function of the ultimatum, which is generally recognized to be the least ambiguous means of communicating a threat. The classic ultimatum consists of three components: a specific demand; a time limit, which may be explicit or implicit; and a threat of punishment for noncompliance that is sufficiently strong and credible.<sup>28</sup>

"The most formidable document ever presented by one independent state to another"<sup>29</sup> was the ultimatum that Austria-Hungary delivered to Serbia on 23 July 1914, following the assassination of Archduke Franz Ferdinand at Sarajevo. The ultimatum contained ten demands that had to be fulfilled. The Serbian intention to comply had to be communicated to the Austro-Hungarian government within forty-eight hours. The Serbian government drafted a conciliatory reply in which five demands were accepted, four were accepted with reservation or request for clarification, and one was rejected. The Austrians, eager to begin military operations, ignored the fact that the Serbs had probably attempted to comply with the note to the greatest extent possible. Diplomatic relations were broken, and Austria-Hungary

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<sup>28</sup>George et al., pp. 27-28.

<sup>29</sup>Laurence Lafore, The Long Fuse: An Interpretation of the Origins of World War I (Philadelphia: Lippincott, 1971), p. 225.



mobilized against Serbia. The actual function of the ultimatum was to instigate, rather than deter, the outbreak of war. Thus absolute clarity of threat may be of as limited utility as absolute ambiguity in deterrence threats. A more reasonable approach to the question of clarity may be to conceptualize the problem as a search for the optimum, rather than the maximum, degree of clarity. It is reasonable that the optimum degree of clarity will vary from situation to situation, and that the degree of communicated clarity can with rare exception stray in only a limited degree from the clarity with which policy makers perceive their level of actual commitment to a policy of deterrence.

#### Functions of Ambiguity

##### Preserving Options

If the primary function of clarity is to impute a degree of automatism to deterrence threats, then the primary function of ambiguity is to detract from that automatism. Obviously, and with good reason, few threats in the real world are completely explicit. First, keeping the magnitude of a threat as low as possible ensures that the cost will be low if deterrence is challenged.<sup>30</sup> Second, too much automatism is

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<sup>30</sup>Jervis, Logic of Images, p. 82.

destabilizing because it provides motivation for a preemptive attack. Third, if automatism is an irrational strategy that deliberately limits options, then maintaining flexibility is the strategy of rationality and is the one in fact that is most often employed.

It is essential, then, to be clear about the range of uncertainty which is acceptable. The lower limit must not include the possibility of yielding or of a resistance so feeble that aggression is encouraged. The upper limit must not pose a threat which is either incredible or which would provoke a pre-emptive attack if believed. The lower limit of uncertainty should set the minimum price unacceptably high and, while keeping the maximum price open, avoid the impression of an automatism which is out of control once force is used.<sup>31</sup>

It is true that any degree of ambiguity tends to weaken the deterrent value of a given threat,<sup>32</sup> but the flexibility that is thereby retained is usually essential to cope with changing conditions in real world situations.

Specifically, an ambiguous threat provides an out if deterrence is subsequently challenged and the source is unwilling to carry out the threat. Once the target refuses to fulfill the specified demand, that interest is lost unless the source wishes to reorient his policy from deterrence to defense. However, because

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<sup>31</sup>Kissinger, p. 55.

<sup>32</sup>Ikle, p. 75.

of ambiguity in his original threat, the source may emerge from the situation with his important bargaining reputation and prestige essentially intact, or at least to a greater extent than if he had reneged on an explicit threat.

He can reinterpret the threat, imply that it really didn't mean what it had seemed to mean, claim that the contingency or behavior of the other party is not that which was intended to activate the original threat, or even claim that he never really threatened at all. In short, ambiguity "preserves options"; the threatener can avoid fulfillment with minimum value loss or can act at a lower level of mutual cost and risk than he had threatened.<sup>33</sup>

One interpretation of the "preserving options" function of ambiguity is that it allows a threat source to make a nonsituational pledge, but to interpret it using situational criteria when confronted with a specific challenge:

Thus if a state pledges itself to protect another against aggression and subsequently the other is faced with infiltration and subversion, the state may be able to renege on its commitment by claiming that it had only pledged itself to react in case of direct aggression (i.e., armed attack of large-scale units across borders). Of course such decommitting is difficult or impossible to carry out if events are unambiguous and the actor has clearly spelled out what it will take to activate his pledge.<sup>34</sup>

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<sup>33</sup>Snyder, "Crisis Bargaining," p. 247; also Jervis, Logic of Images, pp. 125-26.

<sup>34</sup>Jervis, Logic of Images, p. 158.



The strategy of preserving options through a degree of ambiguity allows the source to interpret his own threat as he wishes in response to changing conditions. The essence of a totally explicit threat is that the source forfeits his right to reinterpret his original threat. In actuality, a source may renege on even the most explicit threat, even one incorporating a high degree of administrative automatism. When he does so, the source is liable to suffer extraordinary costs in terms of lost credibility, prestige, and future bargaining power since his renege can only be interpreted as a backing down or as a change in policy when under pressure. On the other hand, reneging on an ambiguous threat is not nearly as costly, since it can be construed not as a change in policy or even a reinterpretation, but as an action consistent with the original intent of the policy. The reneging source will deny that any change or reinterpretation is taking place, but that he is acting in accordance with how he perceived he would act in such a circumstance at the time the policy was originated. The function of ambiguity is not to make it easier for a source to renege on his threat, but to reduce the costs to himself if such an action becomes necessary. Disregarding the special case of mechanical automatism, which is likely

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to remain of greater theoretical than practical value, the source always has the option of reneging on a threat, regardless of how explicitly it was originally defined. The above discussion is highly simplified, since it has been assumed that deterrence is challenged only once and the source has a one-time decision whether or not to fulfill the threatened sanction. In actuality, deterrence challenge and response is a fluid process.

Because interaction between source and target is a continual process, ambiguity finds great utility in allowing each party to modify his position in response to feedback. Ambiguity allows both source and target to put out feelers or probes that can be denied if the response is not appropriate. This function of ambiguity "allows an actor to move back to his old position if he has to, not in the sense of retracting an old offer . . . but in the sense of retaining his previous image."<sup>35</sup>

By providing the source with the means by which he can modify his threat after feedback is received, ambiguity may also be useful in increasing the effectiveness of a threat:

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<sup>35</sup>Ibid., pp. 123-24; also Schelling, Arms and Influence, pp. 67-68.



Keeping threats ambiguous early in the crisis preserves the opportunity for escalating pressure on the opponent by gradually making them more explicit and moving closer to commitment. Feedback obtained from the adversary's reaction to earlier signals allows one to better judge the probable effectiveness of firmer commitment.<sup>36</sup>

#### Taking Advantage of Conservative Interpretation

A second widely recognized function of ambiguity is to keep the magnitude of the objective threat low, while counting on the target's own belief system or other influences to create a high magnitude of threat perception. This function is based on the assumption that for any given objective threat, a perception of the magnitude of both components will be created. If the demand and sanction are both defined explicitly and there is every attempt to reduce ambiguity and noise in the system, then it is likely that the target's threat perception will closely coincide with the source's perception of the threat he is communicating. However, if ambiguity is introduced by the source or enters the

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<sup>36</sup>Snyder, "Crisis Bargaining," p. 248. Similarly, "A nation may be able to guard itself against a broader range of injustices if there is some ambiguity about the circumstances under which it will retaliate. See Dean G. Pruitt, "Definition of the Situation as a Determinant of International Action," in International Behavior; A Social-Psychological Analysis, ed. Herbert C. Kelman (New York: Holt, Rinehart & Winston, 1965), p. 401.

system for any reason, then the target's perception of the threat is likely to diverge from the objective threat. The target may perceive the threat liberally, i.e., perceive a less restrictive demand and/or less severe sanction than intended by the source, or the target may perceive the threat conservatively, i.e., perceive greater demands on it enforced by a greater magnitude of response than would be indicated by the objective threat. When the source believes that for whatever reason the threat will be interpreted conservatively, then it is advantageous for the source to employ a measure of ambiguity, thereby keeping the objective threat magnitude as low as possible.

The prevalence of worst case planning and the relatively greater importance of capability over intent in deterrence "equations" dictate that there may be a better than 50 percent chance that any given threat will be perceived conservatively. Thus, ambiguity may find utility in most deterrent threats, if it is to the advantage of the source to have his threat appear greater in magnitude than it may be in fact.

This conclusion is supported by evidence from a simulation in which six nations were manned by subjects in decision-making roles. Each nation was concerned with attaining three goals: expanding consumer goods,

increasing national defense, and developing a nuclear capability. Two nations that were manned by confederates of the experimenters introduced a potentially threatening situation on the average of once per hour during each ten-hour experimental run. Each hour of the simulation, subjects filled out a questionnaire in which they indicated if the induced event had made any of their assigned goals harder or easier to attain. When a subject responded that there was increased difficulty in goal attainment, then he was considered to have perceived threat. Thus, threat was defined as the perceived interference with goal attainment. The conclusion of the experimenters was that "when a potentially threatening stimulus is directed toward an individual he perceives it as threatening that (those) goal(s) which he is most motivated to achieve."<sup>37</sup> Thus, at least in this particular simulation, it would appear that any ambiguity in a threat is resolved by the target in a manner favorable to the source.

An analysis put forth by Dean Pruitt characterizes threat perception as an inference derived from the combination of evidence and predispositions. The

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<sup>37</sup>Margaret G. Hermann, "Testing a Model of Psychological Stress," Journal of Personality 34 (September 1966): 392.



stronger a predisposition, the more relative influence it will have on the perception. The weaker or more ambiguous the evidence, the greater the influence of predispositions. Six sources of predisposition listed by Pruitt are: (1) existing distrust; (2) past experience (e.g., the United States socialized to great fear of surprise attack due to Pearl Harbor); (3) worst case contingency planning (there is a tendency for a person involved in planning for a threat to see a greater probability of that threat coming true than someone not involved in planning for it); (4) building of institutions for coping with threat (such institutions depend upon the existence of threat for their justification; their bureaucratic ideology becomes intertwined with perception of threat); (5) reversal of cause and effect ("People are likely to find it inconsistent to prepare for a threat that may not exist; thus when an institution exists to cope with a threat, it makes the threat appear more real"); and (6) tendency to transfer anxiety ("general feeling of apprehension without a specific object") into fear (existence of a specific object), since anxiety is usually more distressing than fear.<sup>38</sup>

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<sup>38</sup>Pruitt, "Definition of the Situation," pp. 400-1.

Robert Jervis alludes to the existence of a cognitive threshold that any incoming evidence must surmount in order to be accepted. A threat that does not conflict with the target's belief system can be quite ambiguous, while a threat that does conflict with it would have to be quite explicit in order to surmount the cognitive barrier erected against its correct interpretation. Content analysis has demonstrated that interpretation of incoming stimuli is greatly affected by the actor's existing belief system.<sup>39</sup>

The Soviet Union has been particularly adept at creating uncertainty as to capabilities and then taking advantage of the Western tendency to exaggerate the strength of Soviet arms. Because of the Soviet closed society and extremely restrictive information policies in defense matters, it has been relatively easy for the Soviets to lay the seeds for false perception of their capabilities.

The clearest available example is the result of

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<sup>39</sup>Ole Holsti found that decision makers act upon their "image" of the situation, rather than upon "objective" reality, and that the belief system plays an integral role in the cognitive process. Through content analysis of John Foster Dulles' public papers, Holsti found that "Contrary information . . . were [sic] reinterpreted in a manner which did not do violence to the original image." See Holsti, "The Belief System," p. 249; also Jervis, "Hypotheses on Misperception," pp. 454-61.

the July 1955 Aviation Day fly-by of Bison jet bombers over Moscow. The appearance of the bomber in squadron strength took Western observers by surprise, and the fly-by created a Western perception of a Soviet intercontinental nuclear delivery means two years before Sputnik. There is evidence that the Bison fly-by was a sham; the same squadron of Bisons may have been flying in wide circles, reappearing every few minutes.<sup>40</sup> The perception of a bomber gap was created in the West when in actuality the Soviets never had any intention of competing with the numerically and qualitatively superior American manned bomber force. The Soviets intended from the very beginning to rely almost exclusively on intercontinental missiles, and wanted only to buy time in which to develop and deploy a force of nuclear rockets.

The great political success achieved by the July, 1955, Bison fly-by, even in the absence of Soviet efforts to follow up with extravagant claims and new demonstrations, must have impressed the Soviet leaders with the strong tendency of the West to exaggerate the U.S.S.R.'s strategic capabilities and to incline toward pessimism in estimating the strategic balance.<sup>41</sup>

The Soviets took advantage of the carefully

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<sup>40</sup>Allen Dulles, The Craft of Intelligence (New York: Harper & Row, 1963), p. 149.

<sup>41</sup>Ibid., p. 29.



contrived bomber and missile gaps, most notably in the vague threats made against Britain and France in conjunction with the Suez Crisis. The Soviet use of ambiguity provides a textbook case in first inculcating an exaggerated perception of source capabilities, and then taking advantage of the target's belief system in allowing a conservative perception of an ambiguous threat to be formed.

It would be a disservice to leave the reader with the impression that there is unanimity in the literature on this function of ambiguity. Morton Deutsch, after conceding that ambiguity is only apt to be of sustained advantage when it leads to an overestimation of the potential costs of noncompliance, proceeds to advance two caveats to the utility of ambiguity. The first is as follows:

If the threat has to be implemented because of noncompliance, it will look rather puny in comparison with what had been expected. As a result, the threatener will lose credibility despite his implementation of his threat.<sup>42</sup>

This first caveat builds upon the fact that the utility of ambiguity in exploiting the conservative nature of a target's belief system has been considered only in terms of deterrence success. It has been

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<sup>42</sup>Deutsch, The Resolution of Conflict, p. 137.

assumed that the conservative perception will be sufficient to guarantee that the threat need not be fulfilled; if fulfillment is required, Deutsch is correct that the source will probably be unable to match the expected level of violence.

Deutsch's second caveat involves a preemptive discounting of any ambiguous threat, because the target will know that "vagueness in one's promises or threats is one's advantage when one has little power to deliver actual benefits or harms."<sup>43</sup>

After all, if one really has the determination and ability to benefit or harm the other sufficiently to motivate his compliance, why would one want to be vague about this?<sup>44</sup>

The answer to that question will be found in the substance of the case study presented in this paper. For the moment, a rejoinder to Deutsch's question must emphasize that taking advantage of the expected conservative predisposition of the target is indeed one valid use of ambiguity, but it is by no means the only use. Therefore, the target in Deutsch's analysis cannot assume that ambiguity is of necessity always correlated with weakness.<sup>45</sup>

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<sup>43</sup>Ibid.

<sup>44</sup>Ibid.

<sup>45</sup>Robert Tucker argues that Israel should adopt an explicit policy of nuclear deterrence in lieu of its present ambiguous policy of maintaining a "nuclear

### Miscellaneous Functions

1. An ambiguous threat minimizes provocation by engaging the target's pride and self-respect to a lesser degree than an explicit threat.<sup>46</sup> It therefore makes compliance with the source's demand more palatable, since no nation wants to appear as if it is taking a course of action dictated by another state. Thus, ambiguity of threat, in addition to minimizing the source's costs in case of failure, also minimizes the target's prestige loss in the case of deterrence success.

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option." He argues there is little to be gained in pursuing the present coyness as to existence of Israeli nuclear weapons. Acknowledging their existence would decrease Israeli dependence on the United States, provide territorial security without depending on occupied lands, ease the financial drain on Israel's economy, and create the perception among the Arabs that the destruction of the state of Israel is an impossible goal. See Robert W. Tucker, "Israel and the United States: From Dependence to Nuclear Weapons?" Commentary 60 (November 1975): 29-43. The counter argument stresses that Israel's policy of ambiguity avoids the inevitable international censure that would follow announcement of an explicit nuclear deterrence policy. In addition, Arab suspicions of the existence of nuclear weapons and Israel's intent to use them in a last resort situation already provide a deterrent function without the unfavorable political consequences that would follow a formal policy announcement. In 1966, Shimon Peres (now Israel's Defense Minister) told the Knesset: "I know that the Arabs suspect our nuclear intentions, and I know that this suspicion is a deterrent force. Then why should we allay these suspicions?" Time, 17 November 1975, p. 52.

<sup>46</sup> Snyder, "Crisis Bargaining," pp. 247-48.



2. Schelling has pointed out that in certain cases, complete clarity may be self-defeating.

If in order to prove that one is committed to a threat . . . one must display evidence of the commitment or the capability to the other party, the evidence may be of a kind that necessarily yields information helpful to the second party in combatting the threat. . . . If, to prove we would fight a local war in an ambiguous area, it were necessary to station troops there ahead of time, the enemy would have the advantage of knowing their exact location rather than having to prepare in all directions.<sup>47</sup>

Implementation of sophisticated satellite reconnaissance techniques has changed the situation somewhat since The Strategy of Conflict was written, but the direction of change has added increased value to ambiguity. Now, the source does not have to delve into his own resources to demonstrate the existence of a particular piece of potentially threatening hardware; he can let the target expend his own resources to find out for himself. In addition, information gained by the target's own resources will be treated as an index, rather than as a signal, and will be that much more convincing. One can interpret the relative decline of showmanship and ostentation in the annual Moscow May Day parades as reflecting Soviet understanding of this point. Prior to the advent of reconnaissance

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<sup>47</sup>Schelling, Strategy of Conflict, p. 176.

satellites, the Western world had to depend upon the annual parades for a good deal of intelligence concerning new Soviet developments and even production levels (as in the 1955 Bison sham). The Soviets were thus afforded the opportunity to shape Western perceptions in a manner that would support their own goals. Satellite technology has largely negated this function of the parades.

3. Drawing from the context of international negotiations, Jervis notes that if a diplomat wishes to convey his government's ambivalence on an issue, then ambiguity becomes a useful tool of communication.<sup>48</sup> Ambiguity thus becomes both the form and content of accurate communication in such an instance.

Ithiel de Sola Pool notes that clarity of communication is useful in teaching, but that deterrence involves both teaching and the creation of a motivational state in the target. "Raising certainty may help if the objective is to teach a conclusion; lowering it may help if the objective is to compel caution and indecision."<sup>49</sup> A recent study concluded that the creation of disparity between Soviet claims and actual

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<sup>48</sup>Jervis, Logic of Images, p. 128.

<sup>49</sup>de Sola Pool, p. 194.

capabilities served the political purpose of heightening uncertainty in the West. Such uncertainty was useful in concealing Soviet vulnerability when the USSR was strategically inferior and in enhancing Soviet credibility when the USSR did not, in fact, possess a "potent capability."<sup>50</sup> The findings were consistent with Horelick and Rush's conclusion that the goal of Soviet deception was to deepen their opponents' uncertainties and anxieties about the strategic balance and conceal their own.<sup>51</sup>

There is obviously a fine line between ambiguity and deception, and in actual practice the two may be undifferentiable. Uncertainty must be established before gaps in the target's knowledge can be filled by deception.

4. Research into international negotiation behavior indicates that ambiguity in the terminology of agreements is often used in order to preserve some agreement when basic differences still remain.<sup>52</sup>

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<sup>50</sup> Alfred L. Monks and Kenyon N. Griffin, "Soviet Strategic Claims, 1964-1970," Orbis 16 (Summer 1972): 530.

<sup>51</sup> Arnold L. Horelick and Myron Rush, Strategic Power and Soviet Foreign Policy (Chicago: University of Chicago Press, 1966), p. 5.

<sup>52</sup> Ikle, p. 15; also Jack Sawyer and Harold Guetzkow, "Bargaining and Negotiation in International



Noncommittal, vague, and general statements often emerge from conferences in which no substantive solutions to specific problems were agreed upon. Thus, ambiguity keeps channels open for a future agreement.<sup>53</sup> This function of ambiguity, when transferred to the context of deterrence, leaves the door open for a more conciliatory interpretation or denial of the original threat if cooperative behavior is forthcoming. Conciliatory and cooperative behavior is more likely to follow in the wake of a vague threat than after delivery of an ultimatum.<sup>54</sup>

5. Ambiguity may enhance the communication function of a threat by reducing fear arousal. The

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Relations," in International Behavior; A Social-Psychological Analysis, ed. Herbert C. Kelman (New York: Holt, Rinehart & Winston, 1965), p. 487.

<sup>53</sup>"Where neither side to a conflict can acknowledge the outlines of a settlement that both may nevertheless be willing to accept in time, ambiguity is indispensable. . . . Ambiguity over ends is a valid and indeed, essential procedure where there is a reasonable expectation that differences between adversaries, though profound at the outset of the step-by-step process, can eventually be narrowed through agreements which slowly establish an increasing measure of trust and confidence." See Tucker, p. 31.

<sup>54</sup>Three hours before the Serbian response to the Austrian ultimatum was delivered, Serbia ordered the army mobilized and made plans to transfer the government from Belgrade to a less exposed site in southern Serbia. Thus, they anticipated war would result even in the face of the conciliatory tone of the note they were drafting. See Lafore, p. 234.

substance of communication is often that the source is beginning the process of commitment that may later result in a willingness to take risks or absorb costs in order to protect its interest.<sup>55</sup>

The common diplomatic phrases "we will not stand (or sit) idly by" while state B does something, or state B "must bear complete responsibility for the consequences of its actions" are threats of this kind. They do not commit the threatener to specific actions, but indicate that state B's actions are perceived as dangerous and could lead to various forms of counter-action or reprisal.<sup>56</sup>

Communications in a threat format constitute a means of transition from normal diplomatic interchange to the pure language of a threat system. As relations between source and target undergo a transformation from normality to military deterrence, messages in a threat format will function decreasingly as means of communication and increasingly as threat statements.

Ambiguity serves to enhance the communication function by controlling the level of fear perceived by the target. "The lesson seems to be to use enough threat to generate stress, but not so much as to

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<sup>55</sup>James E. Dougherty and Robert L. Pfaltzgraff, Jr., Contending Theories of International Relations (Philadelphia: Lipincott, 1971), p. 268.

<sup>56</sup>K. J. Holsti, International Politics: A Framework for Analysis (Englewood Cliffs, N.J.: Prentice-Hall, 1967), p. 233.

produce high anxiety."<sup>57</sup> The implied assumption is that there exists a positive relationship between clarity of threat and induced stress. If the assumption is correct, then there should be an optimum degree of stress that the source would like to impose on the target in a given situation, and hence, an optimum degree of ambiguity.

Various authors have made reference to psychological findings that quality of response increases with the introduction of mild stress, but decreases as the level of stress increases past a certain point. One form of attack on the rationality assumption of deterrence theory is that deterrence is most likely to be tested under crisis conditions in which levels of fear, anxiety, and stress are great enough to reduce the chances for a rational response to a given provocation.<sup>58</sup>

The assumptions upon which the fear-reducing function of ambiguity is based are highly tentative in

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<sup>57</sup>Singer, "Inter-Nation Influence," p. 429.

<sup>58</sup>One attack on the concept of deterrence itself focuses on the fact that "Punishments are less than ideal means for influencing behavioral change, especially when used alone, because they increase anxiety and hostility in those upon whom they are used." See Thomas W. Milburn, "What Constitutes Effective Deterrence?" Journal of Conflict Resolution 3 (March 1959): 139-40.



nature. Behavioral evidence relevant to these assumptions is primarily confined to research designs from social psychology and simulation. Therefore, a more complete discussion of this last function of ambiguity will take place in the section concerned with those data sources.

#### Methods of Creating Ambiguity

Any attempt to construct a mutually exclusive typology of means of implementing ambiguity is doomed to failure, since rarely is one or another means used in isolation. The organization of this section, therefore, is purely to aid the presentation of material and is not intended to be of theoretical significance. Ambiguity is treated in this section as an independent variable, subject to manipulation by the source.

Certain subjective conditions of the target ease the task of the source wishing to project ambiguity. The smaller the number of highly placed people who know the source nation well, the poorer the capacity to empathize with citizens of the source nation, and the fewer the channels of communication between source and target, the easier is the source's task of creating

ambiguity.<sup>59</sup> The target's own ineffectual efforts to determine or correctly interpret available information often produces ambiguity, independent of the source's efforts. Ambiguity results from information lack, conflicting information, or information overload. Information lack was evident in the first days of the Korean invasion. The exact character of the invasion or South Korea's ability to deal with it was not known. A situation involving conflicting information is presented by Kennedy's efforts to determine the effects of the Buddhist protests against the Diem regime in South Vietnam in late Summer 1963. He sent Marine General Victor Krulak and the State Department's Joseph A. Mendenhall to Vietnam on a fact-finding mission. Upon their return, they gave sharply differing assessments of the potential effect of protests on the war effort. As a result, Kennedy never was able to define a clear policy toward the Diem regime. The classic example of information overload is the Pearl Harbor attack. Conflicting information and noise in the system were associated with overload in hindering efforts to correctly interpret warnings that hindsight indicates would have been adequate to prevent the

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<sup>59</sup>Pruitt, "Definition of the Situation," p. 405.

catastrophe.<sup>60</sup>

Ambiguity is most often associated with signals, rather than indices, and signals are most often associated with verbal behavior. Verbal behavior in international relations is rooted in diplomatic language, and there can be no doubt that the ability to communicate threats with "outwardly vague and innocuous language"<sup>61</sup> is an advantage to the source. The primary function of diplomatic language, however, is not to induce ambiguity, but to provide clear communication to the intended audience (usually target elites), while hiding the exact meaning from unintended audiences (target and/or source publics).<sup>62</sup> This function may be in decline as interested public audiences become more sophisticated, and thus come into possession of the "code." Diplomatic language serves a common interest "in removing much of the emotional or provocative content from threatening communications."<sup>63</sup> This function implies that the source does not necessarily

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<sup>60</sup>The categories and examples are from Charles F. Hermann, Crises in Foreign Policy (Indianapolis: Bobbs-Merrill, 1969), pp. 108-10.

<sup>61</sup>Snyder, "Crisis Bargaining," p. 249.

<sup>62</sup>Jervis, Logic of Images, pp. 115-16.

<sup>63</sup>Snyder, "Crisis Bargaining," loc. cit.



help his cause (enhance chances of compliance) by maximizing fear and anxiety.

Noise is an effective method of creating ambiguity. Noise is typically generated by echelons below the top and is often unauthorized. It communicates information, but there is no guarantee to the target that the information will be consistent with the source's official position. Interpretation of noise is a risky business, since the target must determine if the noise is an intentional leak, or if it can be construed as an index of dissension within the source's hierarchy. Open societies will generate more noise than closed societies, since individual government agencies are more free to voice their own positions. The target's task becomes increasingly difficult as the level of noise increases. This is one of the reasons why states are reluctant to form perceptions based on verbal signals unsupported by actions.<sup>64</sup>

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<sup>64</sup>T. Nardin, "Communication and the Effect of Threats in Strategic Interaction," Peace Research Society (International) Papers 9:69-86, cited by Barry R. Schlenker, Thomas Bonoma, James T. Tedeschi, and William P. Pivnick, "Compliance to Threats as a Function of the Wording of the Threat and Exploitativeness of the Threatener," Sociometry 33 (1970): 395. Additionally, "Any threat remains somewhat ambiguous until a further supportive response is made by the threatener. . . . The effect of a threat thus seems highly dependent on the concomitant subsequent behavior of the source, and the context in which the threat message is delivered."

Use of potentially unreliable intermediaries between mutually antagonistic nations serves to protect the actors' images, for if conciliatory words are construed as a sign of weakness, the originating state can disclaim them by saying the intermediary inaccurately conveyed its intent.<sup>65</sup> North Vietnam gained many advantages by agreeing to communicate only with sympathetic anti-war groups on prisoner of war matters. From the official United States point of view, information brought back from these intermediaries was unreliable and biased. North Vietnamese use of these groups was an attempt to: (1) embarrass the American government by forcing it to grant semi-official status to the peace groups; (2) force the American government to rely upon these groups for information not obtainable elsewhere; (3) give the peace groups a positive function in the eyes of the American public, thus increasing their status, respectability, and political clout; (4) decrease official morale by putting the U.S. government on the horns of a dilemma; either work through groups that the government and especially the military abhorred, or be put in the position of refusing information that could lead to increased welfare or

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<sup>65</sup>Jervis, Logic of Images, p. 267.

repatriation of prisoners of war; (5) use the groups to bring back film and eyewitness reports of humane conditions in POW camps and American bombing "atrocities."

The simultaneous use of many verbal methods of inducing ambiguity is best illustrated by the various tactics employed by the Soviets in creating Western perception of a missile gap. Soviet leaders made threats that presupposed capabilities they did not have; they demonstrated new weapons and allowed the West to credit the USSR with production status or full deployment; they took actions that implied confidence that their capabilities were as claimed.<sup>66</sup> The Soviets avoided explicit claims that could have been subject to falsification.

The most inflated claims of the Soviet leaders pertained to questions that were largely matters of judgment, such as the consequences of thermonuclear war and the over-all strategic balance defined grossly. These claims implied the possession of very large operational strategic forces without actually asserting it. It was left to Western observers to make the logically correct, if factually false, inference.<sup>67</sup>

Other verbal tactics were to make explicit statements about vague entities ("balance of forces"), but only vague statements about specific subjects

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<sup>66</sup>Horelick and Rush, p. 5.

<sup>67</sup>Ibid., p. 40.



(weapon systems); to state their superiority in qualitative rather than quantitative terms; to use repetition for conditioning; and to reference Western authorities as supportive evidence.<sup>68</sup> Internal consistency was maintained through the tight control of media that is a characteristic of closed societies.

Military action can be employed ambiguously. Thus weapons procurement policies and military deployments become a form of communication.<sup>69</sup> The movement of naval forces has traditionally been a popular method of signalling. Their movements can be easily stopped, started, and redirected. It is relatively easy to change the peaceful or hostile character of a naval deployment. Hostile actions can be disavowed as due to the unauthorized initiative of a local commander.<sup>70</sup>

Land-based aircraft deployments have been utilized as a communicator of intent. The most notable

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<sup>68</sup>Ibid., pp. 40-41.

<sup>69</sup>Lester C. Van Atta, "Arms Control: Human Control," American Psychologist 18 (January 1963): 40. "Intelligent arms management involves, among other things, the administration of our weapons so as to convey a message to all countries regarding our national policies."

<sup>70</sup>Alfred Vagts, Defense and Diplomacy (New York: King's Press, 1956), p. 235; also Jervis, Logic of Images, p. 135.

example was the rapid deployment of the 83rd Fighter-Interceptor Squadron from Hamilton Air Force Base, California, to Taiwan during the 1958 Formosa Straits crisis. At that time, the squadron's F-104 Starfighters were the highest performance production fighter aircraft in the world. Armed with Sidewinder missiles, they represented the committal of American frontline weapons to the defense of the offshore islands. The F-104s made their presence conspicuously known by flying across the Straits at twice the speed of sound in such a fashion as to ensure their presence was noted on mainland Chinese radars. The selection of aircraft rather than army troops in a combat capacity defined the limits of the American involvement. As it turned out, the F-104s did not see action, but the Sidewinders did, hung onto Nationalist Chinese F-86s.

The Soviets typically use the flexibility of military maneuvers as a signalling device, a means of bringing pressure to bear, and as a means of effecting a fait accompli. Warsaw Pact forces maneuvering on Czechoslovakian borders in 1968 performed all three functions.

A means of inducing ambiguity that is receiving continued attention is the manipulation of risk. Thomas Schelling has become identified with this means of

inducing ambiguity through his game theory approach to strategic bargaining. To Schelling, "brinkmanship" means "manipulating the shared risks of war."<sup>71</sup>

Implicit in the concept is that the source introduces the risk, but once it enters the system, the level of risk is shared by both sides, in the expectation that the target, because his resolve or his interests at stake are not as great, will be less able to tolerate the risk than the source.

Uncertainty imports tactics of intimidation into the game. One can incur a moderate probability of disaster, sharing it with his adversary, as a deterrent or compellent device, where one could not take, or persuasively threaten to take, a deliberate last clear step into certain disaster.<sup>72</sup>

Schelling sees the function of threatening limited war, or more precisely, taking steps that may make it impossible to keep from falling into a limited war, not so much a means of gaining a substantive objective, but as means of creating some finite risk of escalation to general war that is clearly intolerable to both sides.<sup>73</sup> Schelling sees the ideal function of American troops in Europe not as one tripwire that

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<sup>71</sup>Schelling, Arms and Influence, p. 99.

<sup>72</sup>Ibid., p. 103.

<sup>73</sup>Schelling, Strategy of Conflict, pp. 190-91.



either succeeds or fails entirely, but as a succession of tripwires that, as they are tripped, incrementally increase the probability of escalation.<sup>74</sup>

Inducing an element of shared risk is closely related to automatism. True automatism would result if the engagement of American troops in Europe were mechanically or administratively tied to American nuclear commitment to NATO. That is not the case, since no explicit American statements have been made to that effect. Ambiguity has been introduced into the situation by the mutual recognition that if American troops are engaged in Europe, some level of American involvement becomes inevitable, and the risk of nuclear escalation becomes greater.

The critical feature of the analogy, it should be emphasized, is that whether or not the trip wire detonates general war is--at least to some extent--outside our control, and the Russians know it.<sup>75</sup>

Various means are available for regulating the

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<sup>74</sup>Forward basing of the independently controlled French Pluton in Germany adds an element of shared risk with which NATO itself may be uncomfortable. There are now two Atlantic Community nuclear thresholds in Europe, and the one that will trigger escalation will, of course, be the lower of the two. See Jacques Isnard, "Pluton's Ambiguous Virtues," Manchester Guardian 2 (August 1975): 11.

<sup>75</sup>Schelling, Strategy of Conflict, p. 192.

degree to which the situation is "outside our control."

Among them are:

. . . innovations, breaches of limits, manifestations of "irresponsibility," challenging and assertive acts, adoption of a menacing strategic posture, adoption of headstrong allies and collaborators, spoofing and harassing tactics, introduction of new weapons, enlargement of troop commitments or the area of conflict. . . .<sup>76</sup>

Schelling provides the most telling critique of his own strategy when he notes that the only effective way to implement the strategy of mutual risk is to do so in such a way that only the withdrawal of the adversary can reduce the tension. "Otherwise it may turn out to be a contest of nerves."<sup>77</sup>

Examination of one particular facet of the Cuban missile crisis is germane to the above discussion. It involves the attempt by Khrushchev to create ambiguity by not making explicit who controlled the Cuban missiles. The results are illuminating and may define the limits beyond which ambiguity creates an intolerable level of shared risk.

Horelick and Rush hypothesize two possible rationales behind the emplacement of nuclear missiles in Cuba. The first, as a deterrent against another, more determined American attack on Cuba, would be maximized

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<sup>76</sup>Ibid., pp. 193-94.

<sup>77</sup>Ibid., p. 194.

if Castro had control of the missiles. Additionally, if they were ever fired in that capacity, there would be reduced risk of the Soviet Union's being plunged into war with the United States. Castro had a reputation in the United States for impulsive, irresponsible behavior, and in the spirit of rationality of the irrational, such a personality with his finger on the button would be a potent deterrent.

On the other hand, if the Soviets wished to bring Cuban-based missiles to bear in support of Soviet interests, e.g., Berlin, then the Soviet Union had to have control of the missiles. Khrushchev made no effort to resolve the ambiguity, either wishing to have the best of both worlds or remaining unaware of the effect the ambiguity would have on American decision makers.

On 22 October, Kennedy unilaterally resolved the ambiguity:

It shall be the policy of this nation to regard any nuclear missile launched from Cuba against any nation in the Western Hemisphere as an attack by the Soviet Union on the United States requiring a full retaliatory response upon the Soviet Union.<sup>78</sup>

Despite the advantages to be gained from

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<sup>78</sup>New York Times, 23 October 1962, cited by Horelick and Rush, p. 132.



ambiguity of political control over the missiles, Khrushchev then immediately resolved the ambiguity from his side. William E. Knox, Vice-President of Westinghouse Electric, who was in Moscow at the time, came away from his 24 October meeting with Khrushchev with the following report:

. . . the Cubans were very volatile people, Mr. Khrushchev said, and all of the sophisticated hardware furnished for their defense was entirely under the control of Soviet officers; it would be used only in the event that Cuba was attacked, and it would never be fired except on his orders as Commander in Chief of all of the Soviet Union.<sup>79</sup>

Three days after the meeting with Knox, Khrushchev sent a confirming letter to Kennedy, employing the classic means of redundancy in order to guarantee clarity:

The weapons in Cuba that you have mentioned and which you say alarm you are in the hands of Soviet officers. . . . Therefore, any accidental use of them whatsoever to the detriment of the United States is excluded.<sup>80</sup>

Of theoretical importance, both sides quickly responded with behavior that tended to reduce the level of ambiguity. Temporizing action was not available to Kennedy, since no amount of information-seeking

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<sup>79</sup>New York Times, 18 November 1962, cited by Horelick and Rush, p. 133.

<sup>80</sup>Pravda, 28 October 1962, cited by Horelick and Rush.

behavior, such as reconnaissance flights, could reveal which country retained political control over the missiles. On the Russian side, Khrushchev demonstrated his own intolerance for his self-created ambiguity by reassuring the President through two channels of communication that the Soviets (presumably the more rational, less trigger-happy, less easily provoked, and more responsible party) had control of the missiles.

An indicated hypothesis is that a minimum level of clarity that must be maintained in a crisis is explicit identification of the adversary. Ambiguity as to identity of the threat source may lead to extremely destabilizing behavior motivated by intense psychological pressure to identify the adversary. Doubt as to the identity of the adversary thus represents a level of ambiguity for which there is no demonstrated tolerance in international relations. Additional evidence may be found in the efforts of the nuclear nations to enforce nonproliferation and their increasing chagrin at seeing the failure of their efforts. Defense planners can look not too far ahead to the ultimate nightmare when many nations may possess nuclear weapons and clandestine means of delivery such as the submerged nuclear submarine. One can conceive of all sorts of Strangelovian scenarios involving

nuclear blackmail by unidentified nations. The sense of anxiety they project is not a function of the magnitude of the threats, but of their ambiguity.

### Determinants of Ambiguity

The previous section examined ambiguity as an independent variable, listing the various means by which it can be introduced into a situation when it is to the source's advantage to do so. In contrast, this section will be concerned with the reasons why ambiguity is always present to some extent. In the present context, ambiguity is treated as a dependent variable and as a function of certain existing conditions.

The first and most ubiquitous of these conditions is the philosophical impossibility of the existence of total clarity in any cross-cultural communication. Ambiguities occur all the time in agreements that are negotiated face to face between national representatives.<sup>81</sup> The prospects for ambiguity are enhanced in a

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<sup>81</sup>For a discussion of Soviet use of ambiguity in SALT, see Colin S. Gray, "SALT I Aftermath: Have the Soviets Been Cheating?" Air Force Magazine 58 (November 1975): 28-33. Gray's conclusion is that the Soviets do not recognize any spirit of an international agreement, as do Western negotiators. As a result, the Soviets feel responsible for acting consistently only within the letter of the treaty. They gain an advantage over the



crisis situation when communication is often by transmitted message or ad hoc intermediary. Even in the presence of good faith, there may be reduced opportunity for feedback. Requests for clarification may be regarded as a sign of weakness or a search for accommodation.

There is a certain minimum level of ambiguity in every agreement because, "There is some threshold below which the commitment is just not operable, and even that threshold itself is usually unclear." We are unlikely to start a war if a drunken East German soldier walks across the border or traffic on the Autobahn is blocked because of a legitimate breakdown of an East German vehicle.<sup>82</sup> The implicit definition of the threshold is of course tied to the spirit of the agreement. Because of cultural differences, linguistic misinterpretation at the first level of semantic ambiguity, or claims that the situation has changed, there will occur in all good faith, even between

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United States by refusing to agree to any but ambiguous language in those sections of the treaty in which they do not wish to limit themselves unduly. The United States, by attaching "Unilateral Statements" to the treaty, holds itself to more stringent criteria than do the Soviets. For a related discussion, see also Paul H. Nitze, "Soviet's Negotiating Style Assayed," Aviation Week and Space Technology 102 (17 February 1975): 40-43, and (24 February 1975): 63-69.

<sup>82</sup>Schelling, Arms and Influence, p. 67.

friendly nations that are party to an agreement, certain ambiguities. Between antagonistic nations perceiving international negotiations as a zero-sum game, the potential for ambiguity is increased.

Agreements and threats are attempts to cope with an uncertain future. Historically, high-confidence prediction about the external environment relevant to military planning has proved impossible. All four major twentieth century wars of the United States were unanticipated.<sup>83</sup> In the last decade there have been several stunning instances of near-term intelligence failure, notably the 1968 Tet offensive, the 1973 Arab-Israeli War, and the Arab oil embargo. If one cannot foresee major events occurring in limited contexts upon which one is already focusing intensively, one should hold little hope for prognosticating broad future developments that will affect nuclear deterrence, alliance relationships, or weapons developments. The demonstrated impossibility of anticipating, much less planning for, uncertain future events, provides a great measure of justification for France's distrust of

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<sup>83</sup>Klaus Knorr and Oskar Morgenstern, Political Conjecture in Military Planning (Princeton: Princeton University, Center of International Studies, Woodrow Wilson School of Public and International Affairs, Policy Memorandum No. 35, November 1968), pp. 10-11.

nonsituational alliance commitments.

. . . change in conditions of interest to military planning may be not only slow and steady, but at times also vast, sudden, and thus abruptly upsetting to the external environment of many states. That is to say, the future must not only be expected to be full of surprises, it must also be expected to feature sudden surprises of great consequence.<sup>84</sup>

Knorr and Morgenstern posit two approaches in defining a military policy to cope with an uncertain future: (1) assume that the future politico-military environment will be essentially the same as the present environment; or (2) implement worst-case planning, which focuses more on projected capabilities than demonstrated intention.<sup>85</sup> In either event, uncertainty about the future will guarantee a certain measure of ambivalence in state policy, and this ambivalence will be manifested in a certain degree of background ambiguity that will always be present.

Ambiguity in a threat often reflects true ambiguity or ambivalence in the mind of the source as to what behavior he wishes to deter. David A. Baldwin gives the example of the dilemma facing college administrators in the 1960s when asked by potential protesters for a precise definition of what would be

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<sup>84</sup>Ibid., p. 15.

<sup>85</sup>Ibid., pp. 17-18.



considered unacceptable protest.

On the one hand, one cannot deter unacceptable forms of protest unless one gives would-be protesters at least a vague idea as to the nature of unacceptable protest. On the other hand, a precise definition of unacceptable protest would also clarify loopholes. Since the administrators were unable to anticipate all the ideas that might occur to the protesters--a group that had shown fantastic imagination--they were reluctant to give a precise definition of unacceptable protest in advance. Many administrations thus confined their demands to forbidding "disruptive behavior," "interference with the orderly processes of the college," or "infringement of the spirit of free inquiry."<sup>86</sup>

In Schelling's view, generators of uncertainty are omnipresent in a deterrence situation: "The essence of the crisis is its unpredictability."<sup>87</sup> Implicit in Schelling's point of view is that no nation will knowingly take a step that it believes will irreversibly bring about nuclear war. In any sense of the term, it would be irrational to bring about such a war in defense of any national interest, since that interest (and many others) would be compromised in the conduct of the war. However, it is not irrational for nations to engage in risky behavior in order to incur a bargaining advantage; such is the stuff of international bargaining behavior.

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<sup>86</sup>Baldwin, p. 76.

<sup>87</sup>Schelling, Arms and Influence, p. 97.

While managing the risk of nuclear war can be deemed rational in some sense, one must still recognize the everpresent uncertainties in such a strategy. These uncertainties are present in large part because any strategy of deterrence involving management of risk must act simultaneously so as to maximize two incompatible goals.

Conditions of crisis are apt to produce a combination of pressures to engage in clear-cut demonstrations of resolve and to undertake risky actions for bargaining purposes on the one hand, and to act prudentially in response to perceived increases in the danger of destructive outcomes on the other hand. . . . Conditions of crisis are apt to stimulate, at one and the same time, incentives to employ organized coercion for bargaining purposes as well as incentives to prevent coercion from taking the form of overt violence.<sup>88</sup>

The resulting schizophrenia inherent in a nuclear deterrent policy tends to produce bargaining patterns which are unpredictable and subject to "erratic oscillations."<sup>89</sup> Academic strategists sometimes lose sight of the fact that deterrence, while a powerful and pervasive force in international relations, is not an end in itself, but a tool of policy makers. The character of deterrence will thus reflect the nature of the goals it is to maximize. Nuclear threats

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<sup>88</sup>Young, p. 177.

<sup>89</sup>Ibid.

then become a special mode of communication employed to demonstrate to an adversary the extent of commitment a nation has made to the use of force in defense of certain more or less defined national interests. Yet deterrence must communicate commitment to two conflicting goals: the avoidance of war and the defense of interests. Under crisis conditions, any given action is unlikely to further both goals simultaneously; one goal must suffer in order to further the other. Thus, the origin of Young's "erratic oscillations" becomes clear. The cognitive ambivalence generated by the requirement to simultaneously maximize two incompatible interests results in behavioral and verbal ambiguity that must of necessity be associated with the exercise of a deterrence policy.

Effects of Ambiguity: Social Psychology  
and Simulation Findings

References to essentially psychological concepts such as fear, anxiety, and stress permeate deterrence literature. This section represents an attempt to explore the literature of social psychology and small group simulation that may be applicable to the study of ambiguity in deterrence threats.

The advantages of simulation are that scientific



control is possible and that a design can be constructed in such a manner as to test the particular variable(s) of interest at the moment. Disadvantages are numerous. Small group simulation is a far removed context from international relations in that it usually involves young and inexperienced participants, can enforce no consequences outside the game room, finds it difficult to apply stress, and must drastically compress real world time constraints.<sup>90</sup> Nevertheless, one should not eschew results gained from laboratory or simulation research. One may regard these sources as "a flexible mode of discovery and clarification rather than as a mode of rigorous test or validation."<sup>91</sup> The most scientifically correct way of interpreting results from these sources would be to accept their validity (subject of course to the usual critiques of each individual experiment) within the context in which they operate, and to note that their validity for any other context is a function of the seriousness of various transfer problems. One such problem involves the assumption of reductionism--that nations will act in a similar manner

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<sup>90</sup>Herbert C. Kelman, "Social-Psychological Approaches to the Study of International Relations," in International Behavior, pp. 595-97.

<sup>91</sup>Ibid., p. 600.

to individuals in the experimental situation. In assuming reductionism, one must also assume that a nation exhibits certain anthropomorphic characteristics, such as rationality, irrationality, and emotional affect.

Because the epistemological and transfer problems associated with simulation have generated a substantial literature in its own right, it serves little purpose to become embroiled in the controversy in this paper. Suffice to say, the findings of this section should not be treated as conclusions, but as speculative hypotheses within the context of strategic deterrence. One can really say little more than that here are presented some types of behavior and causal relationships that are possible and on the face of it are more powerfully demonstrated than if they were generated by idle speculation or application of "insight" alone. They do enjoy demonstrated empirical validity in at least one context.

There are three justifications for examining the bulk of the social psychology and simulation literature in this one section. First, many of the designs discussed reference one another. Second, the findings tend to crosscut the functional categories of the other sections of the chapter. Third, it may be useful to

treat the findings as effects of ambiguity, since it would be questionable to assume that ambiguity has been used purposefully by decision makers in an effort to bring about some of the more subtle and sophisticated psychological effects on their targets.

#### Fear Arousal

The first substantive topic concerns the effect of fear arousal on compliance with the specified demand. Singer subscribes to the view that induced fear is functional up to a point, but that too much fear-induced stress hinders the target's ability to recognize and adequately respond to communication.<sup>92</sup> Similarly, William Livant notes that:

. . . the effect of threat-induced fear on rationality cannot be taken for granted. If it should be the case that its effect is to impair rationality, deterrent threats are open to serious question.<sup>93</sup>

In the present context, the effect of ambiguity upon the level of induced fear is also at issue. The bulk of theoretical deterrence literature subscribes to the view that ambiguity detracts from the deterrent function of a threat by reducing perceived credibility,

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<sup>92</sup>Singer, "Inter-Nation Influence," p. 429.

<sup>93</sup>William P. Livant, "On Deterrence," Journal of Conflict Resolution 5 (September 1961): 340.



i.e., reducing the target's fear that noncompliance will result in an intolerable level of violence.

However, there is also compelling evidence that beyond a certain point, ambiguity actually increases the level of induced fear.

. . . it has been suggested that mutual anxiety at the international level is greatest when each country knows enough about the other to recognize that it has the power to inflict harm, but does not know enough to be sure of its intent or of how much power it actually has.<sup>94</sup>

Level of induced fear affects the coping behavior of the target. Since the goal of the source is the target's fulfillment of the demand, it is to the source's advantage to ensure that the nature of his threat does not induce irrational or defensive coping behavior of such intensity that the target is unable to perceive the demand or is unable to fulfill it. Stress has been defined as the perception that a "situation (stimulus) obstructs or threatens to obstruct a goal that he [the target] is motivated to achieve."<sup>95</sup> Emotional affect (anxiety, fear, frustration, hostility, and tension) increases with importance of the threatened

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<sup>94</sup>Gerald D. Berriman, "Fear Itself: An Anthropologist's View," Bulletin of the Atomic Scientists, November 1964, p. 9.

<sup>95</sup>Hermann, "Psychological Stress," p. 381.

goal. As affect increases, coping attempts, which may be realistic or defensive, increase.<sup>96</sup> The resulting coping behavior manifests itself in attempts to deal with the threat.<sup>97</sup>

Most fear arousal research confirms the increase in coping attempts as affect is increased. Still unresolved is whether high affect will induce functional coping behavior (increased attention to the communicated demand and attempts to fulfill it) or dysfunctional defensive behavior. Both classes of behavior, though opposite in effect, are examples of coping behavior, since they are attempts to deal with the threat.

As the result of experiments concerned with the effectiveness of fear arousing communications in motivating children to brush their teeth, Janis and Feshbach found that compliance with the communicated recommendations was most likely when (1) low strength of anxiety was aroused; (2) when there was evidence that complying with the recommendation would negate the threat; and (3) when the communication contained reassuring recommendations which were perceived as a successful means of averting the threat. When these

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<sup>96</sup>Ibid., p. 382.

<sup>97</sup>Ibid., p. 392.

conditions were not met, the experimenters found that communications were met with interfering behavior such as inattentiveness, perceptual distortion, and defensive efforts to deny or minimize the threat.<sup>98</sup> A later experiment, involving the exposure of test subjects to fear arousing and nonfear arousing appeals to stop smoking, uncovered similar results.

During the period of exposure to the communication, there were more manifestations of resistance in the High Threat group than in the Low Threat group. The main criterion for assessing resistance was the number of explicit rejection statements [such as, "I don't believe that."].<sup>99</sup>

Hovland, Janis, and Kelley found that defensive avoidance is most likely to occur when emotional tension is strongly aroused by a communication, when reassurances offered by the communicator and those spontaneously tried out by the target fail to reduce emotional tension to a tolerable level, and when signs of the threat are ambiguous or can be easily

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<sup>98</sup>Irving L. Janis and Seymour Feshbach, "Personality Differences Associated with Responsiveness to Fear-Arousing Communications," Journal of Personality 23 (December 1954): 162. The greatest degree of conformity to communicated recommendations was produced by minimal threat appeal. As fear arousing material increased, compliance tended to decrease.

<sup>99</sup>Irving L. Janis and Robert E. Terwilliger, "An Experimental Study of Psychological Resistances to Fear Arousing Communications," Journal of Abnormal and Social Psychology 65 (December 1962): 410.



ignored.<sup>100</sup> The above designs have yielded findings that support a curvilinear relationship between level of fear arousal and persuasive effectiveness of the communication, as illustrated in Figure 1.<sup>101</sup>

The relationship between the degree of fear aroused by a threat appeal and the degree to which the communicator's recommendations elicit sustained acceptance is generally curvilinear: as the level of fear is increased, motivation to accept reassuring recommendations about ways to cope with the danger will be increased; but as the level of fear mounts higher and higher, resistances are mobilized that can interfere with long-run effectiveness.<sup>102</sup>

Blocking effects of defensive behavior cause the curve to fall off to the right of Point A in Figure 1.

Results inconsistent with the curvilinear hypothesis have been obtained in another research project. Results from an experiment in which high, medium, and low fear arousal was employed in conjunction with an appeal to college students to get a tetanus shot

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<sup>100</sup>Carl I. Hovland, Irving L. Janis, and Harold H. Kelley, Communication and Persuasion (New Haven: Yale University Press, 1953), p. 89.

<sup>101</sup>Figure 1 adapted from Kenneth L. Higbee, "Fifteen Years of Fear Arousal: Research on Threat Appeals: 1953-1968," Psychological Bulletin 72 (December 1969): 440.

<sup>102</sup>Irving L. Janis and M. Brewster Smith, "Effects of Education and Persuasion on National and International Images," in International Behavior, ed. H. C. Kelman, pp. 227-28.

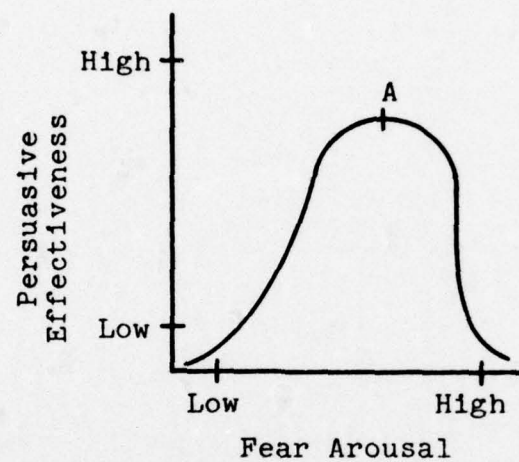


Fig. 1. Persuasive effectiveness as a function of fear arousal (curvilinear relationship).

indicate that persuasive effectiveness of recommendations tended to continually increase under conditions of high fear arousal.<sup>103</sup> Figure 2 illustrates the resultant relationship.

The experimenters attributed the difference between their findings and those of Janis and Feshbach to the differences in perceived effectiveness of the recommended actions in the two experiments. Tetanus shots always protect the target from tetanus, while brushing one's teeth can probably never be 100 percent effective in preventing tooth decay.

The Leventhal experiment also controlled for specificity of recommendation, which was found to be important in alleviating an induced high fear state. Specificity of recommendation was operationalized by informing test subjects how, when, and where to get a tetanus shot.

Keeping in mind the epistemological problems involved in transferring between contexts, one can then speculate as to the significance of the above findings in a strategic context. Whether Figure 1 or Figure 2 is accepted has great bearing on the construction of ideal deterrent threats. It may be that

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<sup>103</sup>Leventhal et al., p. 27.



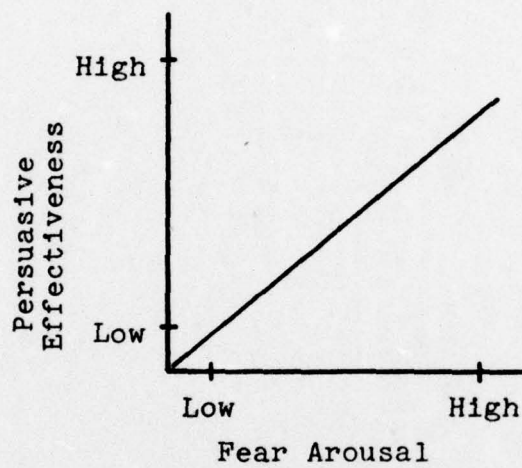


Fig. 2. Persuasive effectiveness as a function of fear arousal (linear relationship).

the curvilinear relationship of Figure 1 predominates when the demand is neither explicitly defined nor understood by the target. Under conditions of high specificity of recommendation (analogous to explicitly stated demand), a relationship such as depicted in Figure 3 may hold.

Point A corresponds to the point in Figure 1 at which defensive mechanisms "take over" and cause a rapid decline in persuasive effectiveness. Figure 3 hypothesizes that up to Point A the relationship between fear arousal and persuasive effectiveness remains essentially the same, independent of specificity of demand. However, past Point A, the specific definition of the action that the target must take in order to avert punishment acts as a barrier against dysfunctional behavior. Thus in the Leventhal experiment, subjects exposed to a high level of fear arousing communication (graphic pictures of advanced states of tetanus) who received a specific plan of action reported "significantly less nausea" than control subjects receiving only a vague instruction to get a tetanus shot. The experimenters interpreted the result to mean that "the specific information eliminated various inward-turning inhibitory features of the fear

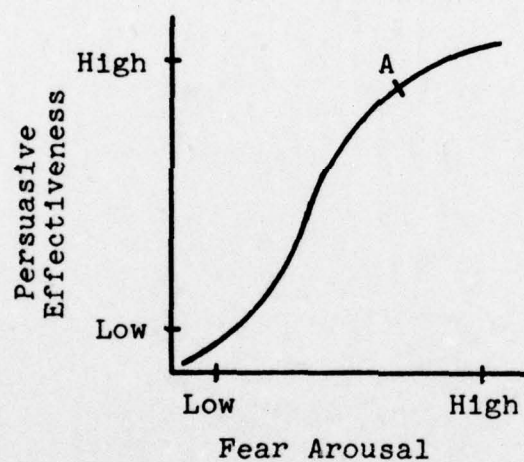


Fig. 3. Persuasive effectiveness as a function of fear arousal (explicit demand).



state."<sup>104</sup> We might expect that Figure 1 would then be valid in the presence of an ambiguously defined demand in a deterrent threat.

It is extremely difficult to establish empirically the relationship between degree of ambiguity and degree of fear arousal. It is a topic that remains for the most part unexamined in social psychology literature. Figures 4 and 5 represent one approach to the problem of establishing the link between ambiguity, fear arousal, and compliance with deterrence threats.

Point A, Figure 4, represents the level of sanction ambiguity associated with the deterrence of nuclear attack on the United States by the Soviet Union. Notice that while ambiguity at Point A is low, it is not zero, which under the postulated conditions would result in abnormally high fear arousal. The clear American deterrent in the model does result in a high degree of compliance (Point A<sub>1</sub>).

Point B, Figure 5, represents the extreme ambiguity inherent in Khrushchev's initial coyness as to whether he or Castro controlled the missiles emplaced in Cuba. The model depicts the degree of ambiguity dysfunctionally high, resulting in a low degree of

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<sup>104</sup>Ibid., p. 28.

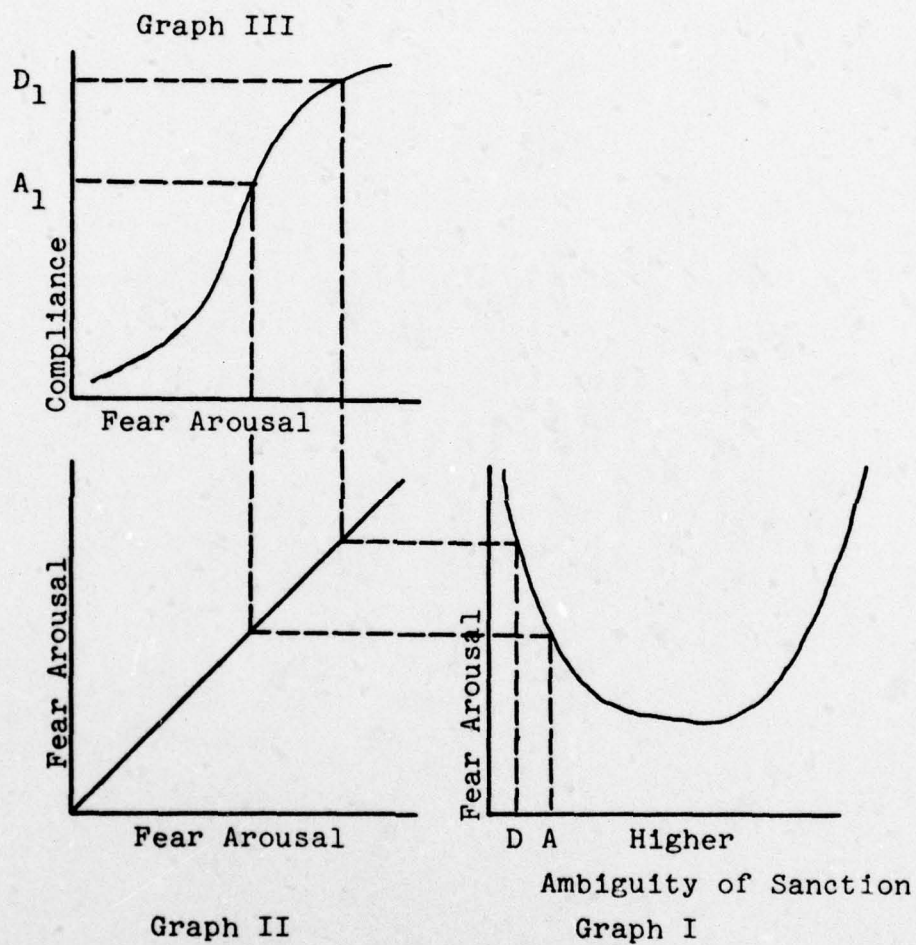


Fig. 4. Target compliance as a function of fear arousal and ambiguity of sanction (assuming explicit demand).

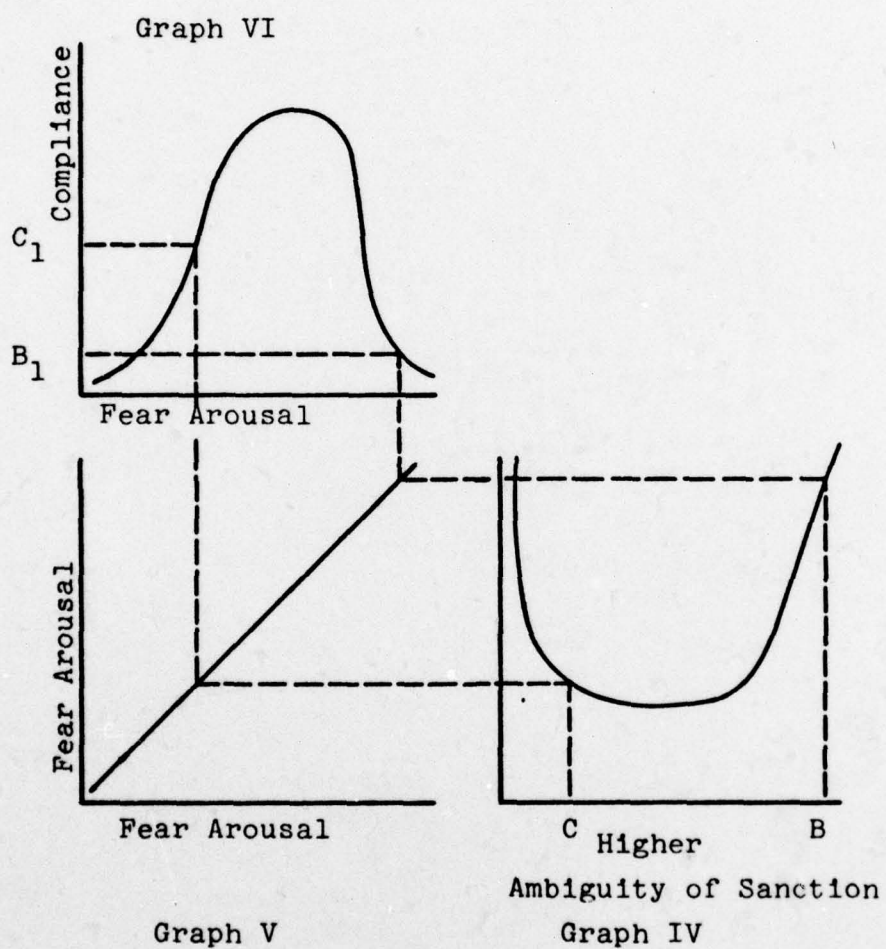


Fig. 5. Target compliance as a function of fear arousal and ambiguity of sanction (assuming ambiguous demand).



compliance. The curvilinear relationship of Graph VI assumes a vaguely defined demand, and this is consistent with the example. Khrushchev was attempting to deter unstated action by the United States against Cuba by allowing Kennedy to believe Castro might have control of the missiles; at the same time, he was attempting to deter the United States from interference with the pursuit of unstated Soviet objectives elsewhere by allowing the contradictory perception that the missiles were controlled by Russian personnel. Consistent with the findings of Janis and Feshbach, Kennedy then was forced to operate on the right side of Graph VI, in the area of irrational defensive behavior. Kennedy, in order to relieve the ambiguity, committed the United States to a policy of automatism by equating any use of the Cuban missiles to an attack by Russia on the United States. Thus, if Castro had in fact been in control of the missiles and fired them for whatever reason (the United States did assume his irrationality and unpredictable temperament), then the United States, had Kennedy made good on his threat, would have plunged into World War III. A plausible alternative, had Khrushchev himself not acted quickly to resolve the ambiguity, would have been a preemptive American strike to neutralize the Cuban missiles. Again, this action

would have been highly destabilizing and would have greatly increased the risk of nuclear war.

In a sense, the situation can be reversed. Let Point D, Graph I, represent the point at which Kennedy was operating on the ambiguity scale when he unilaterally resolved the ambiguity in a risky manner. The model still predicts the outcome in accordance with what actually happened. If Kennedy's unilateral statement is itself interpreted as a deterrent threat with the demand defined very explicitly as the nonuse of Cuban-based nuclear missiles, then the explicit statement of the demand acts as a barrier against defensive behavior on the part of the target, the Soviet Union. In fact, Kennedy's deterrence attempt was met with the most functional of all possible responses from Khrushchev, the resolution of the existing destabilizing ambiguity.

Point C, Graph IV, represents the commitment of American nuclear power in the defense of Western Europe. It is somewhat more ambiguous than the commitment to defend the continental United States with nuclear weapons, since available policy options range from a completely conventional response, through tactical nuclear options, to full massive retaliation. Thus, Point  $C_1$  on Graph VI is relatively high, but still below Point  $A_1$  on Graph III.

Now that a measure of crude empirical validity of the model depicted in Figures 4 and 5 has been demonstrated, it is necessary to state some caveats concerning its application. First, the model is intended solely as a heuristic device for demonstrating the form in which the link between ambiguity, fear arousal, and compliance may be analyzed. No attempt has been made to quantitatively define points on the graphs.

Second, the model assumes the two-party/one-issue model of deterrence. The model makes no statement about the effect of ambiguity on subsidiary motives or the effect of those motives upon ambiguity. Evidence from case study material indicates that the operation of deterrence within a real world context full of ecological variables tends to push degree of ambiguity in Graphs I and IV toward the center from either of the extreme positions represented by Points B and D, thus making deterrence somewhat less effective, though less extreme and possibly safer.

One additional major caveat is in order. Inasmuch as the model builds upon a foundation supplied by the cited social psychology research, it is important to note that the cited designs were not dealing with threats at all, but with warnings. Incidence of lung



cancer, tooth decay, or tetanus was totally uncontrollable by the experimenters, who acted purely in the capacity of communicators of an existing natural threat. Strategic deterrence obviously is concerned with threat situations in which the communicator also controls the means of implementing the sanction. To what extent that realization affects the model is unknown. It does point out the desperate need for empirical research on the link between ambiguity, fear arousal, and compliance with threats.

#### Intolerance of Ambiguity

According to Schelling, the deliberate creation of risk through uncertainty may be of value to the source.

Brinkmanship is thus the deliberate creation of a recognizable risk of war, a risk that one does not completely control. It is the tactic of deliberately letting the situation get somewhat out of hand, just because its being out of hand may be intolerable to the other party and force his accommodation.<sup>105</sup>

Successful employment of Schelling's tactic is dependent upon two assumptions. The first is that the degree of created ambiguity will be less tolerable to the target than to the source. The second is that coping behavior resulting from intolerance of ambiguity

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<sup>105</sup>Schelling, Strategy of Conflict, p. 200.

will be rational, rather than defensive in nature.

In Schelling's scheme, any risk in the system is shared. Therefore, if the strategy is to have the desired effect, there must be some means of explaining why the effect of shared risk is greater on the target than on the source. The answer may lie in the demonstrated positive relationship between psychological stress and intolerance of ambiguity. In a laboratory experiment designed to demonstrate this relationship, subjects were shown a series of pictures, each more complete than the preceding one. Subjects were put under pressure to identify the final picture as early as possible. Results obtained showed that "anxious individuals tend to resolve ambiguous or unstable situations through premature structuring and closure."<sup>106</sup> In the international context, stress is induced by the presence of the threat itself. A second source of imbalance aiding the source is the cognitive predisposition of the target. Moffitt and Stagner demonstrated experimentally that:

Threat-induced anxiety modifies the perceptual process by enhancing constancy. Previously

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<sup>106</sup>Charles D. Smock, "The Influence of Psychological Stress on the 'Intolerance of Ambiguity,'" Journal of Abnormal and Social Psychology 50 (March 1955): 181.

established precepts . . . are adhered to more tenaciously under threatening instructions.<sup>107</sup>

This imbalance of stress must be maintained if the source is to benefit from a policy of shared risk. Knowledge of an adversary's predisposition may thus aid the source's policy makers in making a decision as to when to employ a strategy of shared risk. If the target's cognitive predisposition is of such a nature that premature closure will aid the source, then it may be useful to employ ambiguity in creating stress. The Soviets used such a strategy in creating the bomber and missile gaps. Western policy makers were predisposed to link capabilities and intentions. Through a combination of ambiguity and deception, the Soviets were able to create a false impression as to the extent of their atomic capabilities during the 1950s and early 1960s. The perceived Soviet capability was translated into strategic intent, and as a result, the Soviets were able to enforce a strategically defensive posture upon the Western powers while the Soviets gained time in which to actually construct the capability already

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<sup>107</sup>J. Weldon Moffitt and Ross Stagner, "Perceptual Rigidity and Closure as Functions of Anxiety," Journal of Abnormal and Social Psychology 52 (May 1956): 355; also Sidney Pally, "Cognitive Rigidity as a Function of Threat," Journal of Personality 23 (December 1954): 346-55.



imputed to them.

Evidence concerning Schelling's second implicit assumption is inadequate to draw any but the most general conclusions. If one grants that intolerance of ambiguity will generate coping behavior designed to reduce or eliminate the ambiguity, it is still a difficult task to forecast whether the coping behavior employed by a target in a given situation will benefit or harm the source's efforts. This is so because coping behavior can take on many forms. Simulation evidence indicates that "exploratory acts designed to clarify the circumstances" increase in frequency in the face of ambiguity.<sup>108</sup> Fact-finding missions and aerial reconnaissance are examples of this type of response. On the face of it, information gathering actions would seem to be a functional and unprovocative course of action. But this is not always so. When a U-2 was shot down over Cuba during the missile crisis, the Executive Committee "felt nuclear war to be closer on that day than at any time in the nuclear age."<sup>109</sup> Information gathering is clearly not without its own risks. Indeed, in the face of intolerable ambiguity,

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<sup>108</sup>Hermann, Crises in Foreign Policy, p. 110.

<sup>109</sup>Theodore C. Sorensen, Kennedy (New York: Harper & Row, 1965), p. 714.

the target may be more willing than usual to resort to risky means of information gathering.

Kennedy, in resolving the ambiguity as to whether Castro or Khrushchev controlled the Cuban-based missiles, resorted to a strategy of extreme clarity. Both extremes of the continuum can be destabilizing and dangerous. The two most direct means of resolving ambiguity are capitulation (Cuba 1962, Suez 1956) and striking the source (Pearl Harbor).

Any purposeful employment of a strategy of ambiguity must depend upon the psychological state of the target. Research has demonstrated that intolerance to ambiguity will result in cognitive rigidity, premature closure, and behavior designed to alleviate the ambiguity, but it is still impossible to determine under what conditions each type of behavior is likely to occur. Coping behavior may either aid or hinder fulfillment of the demand. Thus, conscious employment of Schelling's strategy of shared risk, dependent as it is upon inadequately understood coping behavior, is as risky for the source as for the target.

#### Prisoner's Dilemma

Game theory research on the effects of threat has centered around different variants of the classic

Prisoner's Dilemma Game (PDG),<sup>110</sup> which gets its name from the following scenario:

Two suspects are taken into custody and separated. The district attorney is certain they are guilty of a specific crime, but he does not have adequate evidence to convict them at a trial. He points out to each prisoner that each has two alternatives: to confess to the crime the police are sure they have done or not to confess. If they both do not confess then the district attorney states that he will book them on some very minor trumped-up charge . . . if they both confess, they will be prosecuted, but he will recommend less than the most severe sentence; but if one confesses and the other does not, then the confessor will receive lenient treatment for turning state's evidence whereas the latter will get the "book" slapped at him.<sup>111</sup>

In abstract form, the options open to Players I and II are illustrated in Figure 6.<sup>112</sup> Player I may choose between Rows X and Y; Player II chooses between Columns A and B. The symbolic monetary reward that results from each choice is expressed by the matrix.

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<sup>110</sup>The following section is concerned with only one small part of the vast literature generated by the growing discipline of game theory. For a readable introduction to game theory that emphasizes its applicability to real world situations, see Anatol Rapoport, Fights, Games, and Debates (Ann Arbor: University of Michigan Press, 1960).

<sup>111</sup>R. D. Luce and H. Raiffa, Games and Decisions: Introduction and Critical Survey, p. 95, cited by Deutsch, The Resolution of Conflict, pp. 179-80.

<sup>112</sup>Figure 6 and theoretical discussion of the PDG are adapted from Deutsch, The Resolution of Conflict, pp. 189-91. Exact figures in the payoff matrix vary from author to author, but the basic relationships between cells is constant.



For instance, if Player I chooses Row X and Player II chooses Column A, then the AX cell expresses a payoff of \$9.00 to each player. The first number of each matrix is Player I's payoff and the second number Player II's.

	A	B
X	+9,+9	-10,+10
Y	+10,-10	-9,-9

Fig. 6. Prisoner's Dilemma Game payoff matrix (typical).

The mathematical formulation of the game retains the "dilemma" inherent in the narrative description. Player I can maximize his potential gain and minimize his potential loss by always choosing Row Y. Similarly, the selection of Column B would appear to be the optimum choice for Player II in the absence of information as to what Player I's choice has been. Notice, however, that if each player chooses his optimum course of action, they will always end up in the BY cell with payoffs of (-9,-9). If the players were somehow capable of communicating an intent to cooperate, then they could agree to arrive in cell AX, which affords the best mutual payoff function for both

players. The X and A options for each player are risky, as they correspond to not confessing, thereby leaving themselves open to possible double-cross by the other player. From a player's point of view, the object of the PDG is to establish mutual trust with the other player that is the necessary precondition of a cooperative strategy. In the absence of communication and trust, the nature of the game stacks the deck on the side of distrust and suspicion. By carefully controlling and modifying various aspects of the game, especially modes of threat and communication, various experimenters have effectively used the game as an analog for international relations. Some of the experimental procedures and findings are of interest to the present discussion.

A two-player trucking game has been devised as a means of providing a flexible experimental game in which the PDG may be operationalized. In the game, each player is in charge of a trucking company, either Acme or Bolt. The players on each experimental run are to maximize their profits by taking their trucks in the minimum amount of time from their respective "Start" to "Destination." Two routes are available, as depicted in Figure 7. There is no conflict between Acme and Bolt trucks on each player's alternate route, but it is

of such length that a player will lose money if he takes this route. To make a profit, a player must use the common stretch of one lane road. Since there is only room for one truck at a time on the one lane road, it becomes apparent that if both players are to make a profit, a cooperative strategy must be devised. In the original Acme-Bolt experiment,<sup>113</sup> verbal communication between players was not allowed. Each player controlled a gate at one end of the one lane road that he could open at any time but could only close while his truck was on the common stretch of road. The gates were conceptualized as threats by the experimenters. Results of the original Acme-Bolt experiment were as follows: each player fared the poorest (incurred the greatest losses) in a bilateral threat condition (each player had control of a gate). In a unilateral threat condition (only one player had a gate), the player with the gate fared better than the one without a gate. However, both players made the greatest profit under conditions of no threat availability (neither player had a gate).<sup>114</sup>

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<sup>113</sup>Morton Deutsch and Robert M. Krauss, "The Effect of Threat Upon Interpersonal Bargaining," Journal of Abnormal and Social Psychology 61 (September 1960): 181-89.

<sup>114</sup>Summed payoffs (Acme+Bolt) for conditions of no threat, unilateral threat, and bilateral threat respectively were +203.31, -405.88, and -875.12. See Deutsch and Krauss, p. 224.



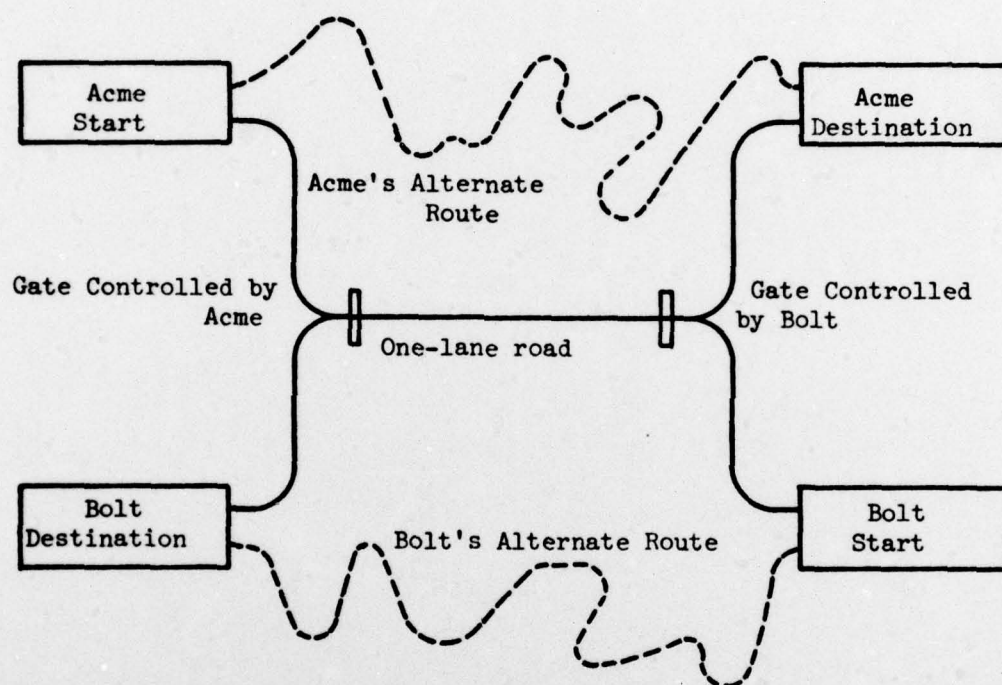


Fig. 7. Prisoner's Dilemma operationalized: the Acme-Bolt trucking game.

Source:

Deutsch and Krauss, p. 219.

The experimenters' conclusions were that when a means of threat is available, it will be used, and that the existence of threat tends to hinder cooperative behavior.

The most telling criticism of the original Deutsch and Krauss experiment is that threat was operationalized in a faulty manner. Harold Kelley defines threats as "means of influence [that] explicitly or implicitly contain the idea that injury will be inflicted unless the threatened person modifies his behavior in some manner indicated."<sup>115</sup> The employment of gates as threats is therefore faulty because in the absence of supporting communication, the gate cannot be employed to express a demand without simultaneously evoking the sanction. Kelley notes that the gates can serve purposes such as punishment itself, gaining revenge, or tricking the other player. The gate can also serve as a communications device in signalling whose turn it is to use the shorter path and as an enforcer of a particular alternation pattern. Additionally, conceptualizing the absence of gates as a "no threat" condition can be attacked on the basis that the

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<sup>115</sup>Harold H. Kelley, "Experimental Studies of Threats in Interpersonal Negotiations," Journal of Conflict Resolution 9 (March 1965): 79.

truck itself can be used to threaten, though not without incurring costs to the source.<sup>116</sup>

A later critique of the use of gates as threats was expressed as follows:

. . . in addition to their possible use to convey the intention of inflicting harm or evil, they [gates] may be used actually to harm, mislead, or take advantage of the other players. . . . It may be possible, therefore, to account for the Deutsch and Krauss results in terms of the gates acting as sources of interpersonal interference and harm rather than in terms of their functions as threats.<sup>117</sup>

Shomer, Davis, and Kelley devised a modified trucking game which provides a means by which the threat and its execution can be separated, thereby sidestepping the conceptual difficulties of the original trucking game. In contrast to the findings of the original experiment, results of the new game indicate that under certain conditions it may be advantageous for players to possess a means of communicating threats.

At the minimum, the ability to communicate threats provides an alternative means of expression that lies between the passive acceptance on the one hand and outright hostile action on the other. At best, the

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<sup>116</sup>Ibid., p. 81.

<sup>117</sup>Robert W. Shomer, Alice H. Davis, and Harold H. Kelley, "Threats and the Development of Coordination: Further Studies of the Deutsch and Krauss Trucking Game," Journal of Personality and Social Psychology 4 (August 1966): 120.



threat means may develop into a shared communications channel heeded by both participants.<sup>118</sup>

Empirical evidence that threats may function as communications devices is significant for the present inquiry into the effects of ambiguity. It must be noted, however, that in addition to the usual transfer problems associated with laboratory experiment, there is an additional caveat in the Shomer experiment that inspires caution. The Shomer experiment allowed for only two possible means of communication--threat and punishment. This admittedly was a vast improvement over the Deutsch and Krauss experiment in which there was only one means of communication--punishment. However, both procedures fall short of the real world situation in which there are usually multiple means of communication, most of which do not necessarily imply threat or punishment.

Geiwitz emphasized the communications potential of threats in a variation of the trucking game by instructing test subjects that a threat need not be followed by a penalty. By using ambiguous threatening messages (e.g., "I am considering a penalty") subjects were able to communicate with one another, coordinate behavior, increase cooperation, and produce more

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<sup>118</sup>Ibid., p. 126.

mutually favorable outcomes than in the Deutsch and Krauss experiment in which the communication of a threat was synonymous with its fulfillment.<sup>119</sup>

A 1970 PDG confirmed Geitwitz's findings and went beyond them in demonstrating that whether the target perceives a threat as a cooperative signal or as an expression of intent to punish is highly dependent upon the source's behavior following the communication of the threat.

If the source behaved accommodatively when in a position of power, the target followed suit and increased his cooperative response rate, and informed the source of his compliant intention so as not to risk a termination of mutual benefits. If, however, the source behaved exploitatively, the target decreased his compliant responses and tried to deceive the source, thus heightening competition.<sup>120</sup>

A PDG in which the experimental groups were controlled for certain personality variables yielded the conclusion that availability of communication increases the likelihood of cooperation.

. . . the major effect of communication was apparently to reduce ambiguity of intentions and expectations. With less ambiguity the players need be less defensive, so that those willing to cooperate can readily do so.<sup>121</sup>

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<sup>119</sup>P. James Geitwitz, "The Effects of Threats on Prisoner's Dilemma," Behavioral Science 12 (May 1967): 232-33.

<sup>120</sup>Schlenker et al., p. 404.

<sup>121</sup>Kenneth W. Terhune, "Motives, Situation, and

The function of communication in reducing ambiguity and thus facilitating cooperative behavior held for all personality groups, though it operated for different reasons on different groups.

Among the Naches [subjects scoring high on Need for Achievement] the major impediment to cooperation seems to have been the ambiguity of messages, while the Nepos [subjects scoring high in Need for Power] seem especially to have required a large proportion of coordinative messages to maintain cooperation. The indication for Nepos is that they required continual reinforcement of each other's intentions, in order to maintain cooperation.<sup>122</sup>

For purposes of the present paper, PDG research is of value in establishing the communications function of threats. More broadly, realization that threats can perform functions other than just "threatening" is the first step towards creating a framework for the study of deterrence that takes into account the full range of functions performed by threats.

#### Summary and Discussion

Intuition, the classic diplomatic experience, and the mainstream of the theoretical literature all support the position that clarity contributes to the

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Interpersonal Conflict Within Prisoner's Dilemma," Journal of Personality and Social Psychology (Monograph Supplement) 8 (March 1968): 21.

<sup>122</sup>Ibid., p. 15.



deterrent effectiveness of a threat and that ambiguity detracts from it. The primary means by which clarity contributes to deterrence is through creation of administrative automatism, which in turn tends to transform the character of a given communication from threat to warning. This function of clarity is not disputed by the author; what is disputed is the notion that ambiguity has no positive function and serves only to detract from deterrence effectiveness and decrease the probability that a demand will be fulfilled.

While it is true that ambiguity is often regarded as a sign of weakness or lack of resolve, it is also true that it performs many positive functions. In at least one theoretically important situation, i.e., when a conservative interpretation is expected, ambiguity actually serves to increase the impact of a given threat. More generally, ambiguity is useful in preserving options and retaining vital flexibility. Employment of absolute clarity in the form of the Austrian ultimatum to Serbia in July 1914 coupled with the inflexible European alliance structure and unchangeable mobilization timetables led to a catastrophic war that nobody wanted. The lesson for today's sometimes superheated relations between the nuclear powers is clear: avenues for flexibility must

be explored, and mutual resort to strategies of automatism employing absolute clarity must be approached with the greatest of caution.

The relationship between ambiguity and fear arousal, though one of the most pervasive phenomena associated with ambiguity, is also one of the least understood. In attempting to find a link between social psychology research and observable international relations, the author has found evidence that a "U" shaped relationship exists between ambiguity of sanction and fear arousal. In other words, the greatest fear is aroused under conditions of extreme clarity or extreme ambiguity. The more frequently occupied middle range between the two poles generates a lesser degree of fear on the part of the target.

A second necessary, but elusive, link is that between degree of fear arousal and target compliance with the demand. Evidence supports the view that under conditions of an ambiguously defined demand, an increase in level of fear results in increased compliance until a certain point is reached at which time irrational defense mechanisms dominate the target's behavior, resulting in a rapid decrease in rate of compliance. Under conditions of an explicitly defined demand, the dropoff in compliance does not occur, presumably because

the explicit definition of what the target must do to avoid punishment acts so as to block out more irrational or dysfunctional coping behavior.

The related phenomenon of intolerance of ambiguity has often been demonstrated in the laboratory. The very existence of a high level of ambiguity has been shown to foster coping behavior. A major task confronting researchers who wish to delve further into the implications of intolerance of ambiguity for strategic affairs is to determine under what conditions such coping behavior will aid or hinder the threat source.

Finally, of overriding significance is the fact that threats do more than just threaten. If the sole function of a threat, or more to the point, the sole effect of a threat, is just the influencing of the target's behavior with relation to the particular crisis at hand, then there would be little use for ambiguous language. Because it is an inescapable fact that ambiguity does occur with regularity in statements of threat, one must conclude that deterrence threats affect the entire range of interests held by the source. To the extent that these effects are understood or taken into account, then deterrence threats and their attendant ambiguity have a multitude of functions. The



range of these functions will be explored in the case study that follows.<sup>123</sup>

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<sup>123</sup>See Appendix A for comprehensive summary of findings from this chapter.